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# *Practice of Physick,*

Reduc'd to the ancient Way of

## OBSERVATIONS

Containing a just Parallel between the

*Wisdom and Experience* of the ANCIENTS,

And the Hypothesis's of

MODERN PHYSICIANS.

Intermix'd with many

*Practical Remarks* upon most *Distempers*.

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Together with Several

New and Curious *Dissertations* ;

Particularly of the

*T A R A N T U L A,*

And the Nature of its Poison :

Of the Use and Abuse of *Blistering Plasters* :

Of Epidemical *Apoplexies*, &c.

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Written in *Latin*, by GEO. BAGLIVI, M.D.  
Professor of Physick and Anatomy at Rome.

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The Second Edition.

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L O N D O N :

Printed for D. MIDWINTER, B. LINTOT,  
G. STRAHAN, J. ROUND, W. TAYLOR,  
J. OSBORN, and J. CLARK. MDC CXXIII.



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THE  
*Author's Preface.*

**T**O form a right Judgment of Diseases, is a very difficult Matter. The Science which teaches us to surmount that Difficulty, is the Subject of this Performance: And indeed, if we consider, that nothing is so conducive to the Perfection of this Science, as Experience, we can't think it strange, that the neglecting or misapplying of Experience, has so far multiplied the Number of Errors that over-run Physick in the Age we live in. Having lately finish'd the course of my Studies at *Naples*, and travel'd all along the Sea-coast of *Dalmatia*, I was fond of nothing so much as visiting the Schools of *Italy*, and trying what pass they had brought the Practice of Physick to, after so great a Noise of New Discoveries. But upon a diligent Survey of 'em all, I found Physick unspeakably born down and ruin'd with the



## *The Author's Preface.*

licentiousness of Opinion, and my Countrymen strangely degenerate from their primitive Wisdom.

For in some Universities I found they had such an invincible Aversion to the Opinions of the Ancients, that they thought it a piece of Meanness and Disparagement, to spend either Time or Pains in perusing the Writings of the *Galenists*. Upon this Apprehension, they tortur'd and rack'd their Wits, to invent some new and unheard of thing; and if they did but light on any such Business, they glory'd in the Invention, and plac'd a Pride in thus serving the Republick of Physick. In other Universities I found 'em so religiously devoted to the Theorems of the Ancients, that they incessantly attack'd even the excellent and useful Discoveries of Modern Authors; and throwing all Diseases into one Mould, admitted of no other means of Cure, but Bleeding, Purging and Blistering. Nay, in all of 'em, there was nothing to be seen, but eternal Wrangling among the Professors of Physick; and either an indiscreet forwardness for the minting of Novelties, or a stubborn Bigotry in adhering to false Opinions that maintain'd their Ground by Anticipation: And, which is worst of all, these Professors aspers'd and expos'd their Mother Science and the Mistress of their Studies, as being an uncertain Juggle; and that not only in their private Inter-



## *The Author's Preface.*

Interviews, but openly and in Books expos'd to publick View. So great is the Consequence of this their Indiscretion, and so heavy is the Detriment that accrues from thence, both to Physick itself and the Professors of it, that this Prince of Sciences, which was always esteem'd by Persons of the highest Dignity, and Rul'd even Kings themselves with a sovereign Sway, is now despis'd in many Places, and forced to yield a precedency to the meanest and even the most pernicious Arts.

Being thus surrounded with an infinite variety of Opinions, I was at a loss to make a just choice; but at last I came to a firm Resolution of siding with none, and of pursuing the Truth with Vigour and Diligence, without any other Guide but Reason and Experience. In pursuance of this Resolve, I spent no small time in taking exact and minute Observations of Diseases; and was quickly sensible that by this means I made a greater Progress in Physick in a few Months, than I had done before in so many Years; and that nothing is truer than that old Saying of *Manilius*; *Artem Experientia fecit, Exemplo monstrante viam*. These Remarks of mine were first carelessly committed to Writing, only for the sake of my own Memory; afterwards I drew 'em out into Classes and Heads, and in that Condition they came into the Hands of my Friends,

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who



## *The Author's Preface.*

who thereupon press'd me very earnestly to publish 'em. For my own part, I was so conscious of my own Insufficiency, and so sensible, that a Physician unguarded with the Authority of Grey Hairs and advanced Years, is commonly despis'd; these Considerations, I say, had so much influence upon me, that I had fully resolved to deny their Request, and stand the shocks of even Violence itself: But at last my Reluctancy was overcome by the Authority and Weight of many of the greatest Men, whose Names I here forbear to mention, for fear of undergoing the Censure of Ostentation and Vain-glory. 'Twill be sufficient, sure, to mention only four of 'em, who are Men beyond the reach of Exception, and in whose Testimony the World will readily confide: I mean, the Learned and Reverend Prelate *Ferdinandus Nuzzius*, a Man of unparallel'd Merit, and born for greater Things: *Luke Tozzius*, present Physician to his Holiness, and a Person of noted Excellency: The Reverend Father *Valla*, Apostolical Preacher of the Jesuits, who goes as far beyond *Laurentius*, as a consummate Knowledge of Divine and Humane Things is above Grammar: And *Paul Stufa*, the Abbot, distinguish'd not only by his Noble Birth, but by a familiar acquaintedness with *Greek* and *Latin* Letters, and a thorough-pac'd Knowledge of the Law.

Before



## *The Author's Preface.*

Before I take leave, I have one Request to make to the Reader, That he'd vouchsafe to pardon my troublesome and almost impertinent Zeal, in recommending and enforcing the necessity of imitating Nature and Experience, and in exposing the Vanity of Hypothesis's and Systems. For in bewailing the deplorable Calamity of the Profession, I thought it necessary, since I could not argue nimbly, at least to inculcate with a pathetick and repeated Regret, the only Remedy that's left. For since the whole Plot of Physick lies in collating Disease with Disease, Time with Time, and Man with Man ; since it lies in distinguishing the imminent and growing Symptoms with peculiar Signs and Names, and allotting 'em proper and seasonable Remedies ; questionless we can't do better Service, both for the Imbellishment of our Profession, and the Health of Mankind, than to influence the Students of our most Noble Science, to have an attentive regard to the Observations made by our Ancestors in the earlier Days of Antiquity, and be careful in forming new ones of their own. Had this course been constantly pursued from the Age of *Hippocrates*, down to the Age we live in, the Progress and Improvement of Physick had been unspeakable by this time. How that necessary and handsome Method, so happily begun by our Ancestors, has been since dis-



## *The Author's Preface.*

continued, and chang'd for Disputes and idle Logomachies ; I can assign no other Reason but the just Judgment of God. Who can think otherwise, that does but cast his Eyes on the state of Things in these our Days ? Days, in which all other Sciences and Arts not only shine in their primitive Splendor, but receive additional Imbellishments every Hour ; while the Practice of Physick alone, by I know not what fatal Mischance, lies most of it in the Dust ; and, which is yet more grating, grows every Day meaner and more despicable in the Eyes of the unlearned Vulgar. This growing Contempt, I take it, is chiefly owing to the Physicians, their despising the Observations upon which the Noble Science is rear'd, and addicting themselves intirely to Systems and Hypothesis's ; their being so sollicitous, not so much to discern and cure Diseases, as to assign 'em handsome and specious Reasons ; by which means it comes to pass, that to the infinite disgrace of Physick, and the irreparable detriment of Mankind, they take their Measures, not from the safe and certain Rules of the Art, but from the Whims of their own Brain.

In the mean time, I would not have any one imagine, that I set about this Work with a prospect of Vainglory, and a design of purchasing the noisy Applause of the World: For there's nothing I study so much



# *The Author's Preface.*

as to wean myself from the Allurements and Decoys of this Life, by keeping in view the instability of mortal Things, and the certainty of eternal Life.

*Nullis nota Quiritibus  
Ætas, per tacitum fluat.  
Sic, cum transferint mei,  
Nullo cum strepitu, dies.  
Plebeius moriar Senex.  
Illi mors gravis incubat,  
Qui notus nimis omnibus,  
Ignotus moritur sibi.*

Senec. Trag. Thyæst. Act. 2.

The only Inducement I had to undertake this Province, was the love of Truth, and a desire of promoting the Publick Good. I leave it to the Judgment of the Wise and the Good, to determine what Service I have here done. For my own part, 'tis sufficient that what I am able to perform, is consecrated to the Publick Good, and in a particular manner to the Benefit and Safety of the Citizens of Rome.

*Rome, Febr. 29. 1696.*

T H E





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OF THE  
*Practice of Physick*

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B O O K I.

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C H A P. I.

*Of the absolute necessity of Observations in  
 the way of Physick.*

C A U T I O N S.

I.



Physician is the Minister and Interpreter of Nature : let him contrive or do what he will, unless he obeys Nature, he cannot govern her : For the Springs and Causes of Diseases lie far beyond the reach of humane Reason ; and oftentimes Nature commences a new Work, when our Efforts are at an end.



## II.

A judicious Soul, instructed by Observations of long standing, compasses the most sovereign way of curing Men; especially if to these Qualifications it adds the Reading of Books. But unless it be very cautious in the perusal of Books, 'tis to be fear'd that what is propos'd for the improvement of Knowledge and Learning, may furnish fresh occasions of Error.

## III.

*Hippocrates*, the Prince of Physicians, speaks in the Words of Nature, rather than those of Man. His Perfection in the way of Physick was such, that the Ages of Antiquity have not produc'd his Equal, and in succeeding Ages he will not be parallel'd; unless Physicians return to their Understanding, and being rous'd, as it were, from a deep Sleep, perceive what a vast difference there is between the Historical and Masculine Physick of the *Grecians*, and the speculative sorry Advances of later Upstarts; unless they give less Credit to imaginary Opinions, and conclude, that *Medicine* ought not to be confin'd to the narrow Limits of our Reason; but, on the contrary, ought to be recall'd from these Streights, to the open field of Nature.

## IV.

Whatever it is that distinguishes the modern Theory from the ancient Ignorance, 'tis all owing to the Experimental Philosophy of this Age. But in order to enlarge the publick Good, by  
 vertues



vertue of the Labours of private Men; the Men of this Age ought to use their utmost Efforts in the same way to arrive at a perfect Knowledge of Practice, which is the capital Thing of the whole Art. By this means, we shall not only lay aside the Opinions and Prejudices that have been long settled in our Minds, but likewise carry the Art of *Medicine*, from a state of Infancy and Ignorance, to an adult and wise Constitution.

V.

The Moderns should not be oppos'd to the Ancients; but united with them, by a perpetual League, as much as may be: For what can be more indiscreet, than to make 'em disagree in Words, when they agree upon the Matter? 'Tis strange, how much this Lechery of coining new Words, retards a young Student in the midst of a successful Progress, and clouds his Notions. The Difference arising from a prospect of Equivocal Words, makes him oftentimes doubt where he is, or which Course he should take in the Cure of Diseases: Nay, oftentimes he falls foul upon some Mistake, and either Deceives or is Deceiv'd under the appearance of Truth or Probability. As for the sick Patients, they are not concern'd, whether you call the Effects of Diseases and the Principles of an animate Body, by the simple and unpolite Names of the Ancients, provided you are perfectly well vers'd in the true Methods of Cure, and can make your Words pass into Deeds, and the Event answerable to your Promises.



## VI.

There's nothing that takes the Mind more off from the Knowledge of Diseases, than the boundless pursuit of Speculation and Disputes, that the *Arabian* Physicians, and the *Galenists* that came after 'em, have so licentiously Encourag'd even in the Practice it self. They over-look'd the fertile and far extended Fields of Nature, where such eminent Genius's might have had a freer range, and chose rather to throw themselves among the Thorns and Trifles of the Dialecticks ; in which, being long entangled, they never rais'd their Mind to the hopes of new Inventions.

## VII.

Physick, is not the effect of human Invention, but the product of Time: For what the Ancients once believ'd of Divination, may justly be said of it, *viz.* that it sprung from such things as long use had approv'd. It may be defin'd thus: A Faculty apprehending and perceiving the several Kinds of Diseases, and explaining them by such things as it has observ'd and taken notice of for a long tract of Time, as being Signs of the Event; and exhibiting Remedies against 'em, not in persuance of any probable Hypothesis, but according to the prescriptions of the Divine Art, warranted by frequent use. If this way of Curing be compar'd with the Splendour, Height and Magnificence of the *Hypothetick* Way, it will perhaps appear mean and even contemptible. But after all, the other has nothing that's Healthy or Vital; but only a wonderful Luxuriancy of Branches and Trees, which indeed are lovely to  
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the Sight, but presently fade, as soon as the luster of Novelty has forsaken 'em. But this we now speak of, does not consist of Fictitious and Fabulous Things; it does not propose to it self Ostentation or vain Glory, but pursues only the true solid Glory, that lies in recovering the Health of Men; 'tis not Calculated for making a shew of its Flowers, but for bringing forth great plenty of the most pleasant Fruits; so that it enlarges its growth ever day, and acquires new Vigour in its progress.

### VIII.

These Men speak Prudently and Considerately, who assert, that *that* part of our Science, which lays too great stress upon Speculations, has no true proper Relation to the Art of Physick: For the Art is made up of such things as are fully survey'd, and plainly Understood, and of such perceptions as are not under the controul of Opinion. It gives certain Reasons which are plac'd in due Order, and chalks out certain Paths, to keep its Sons from going astray. Now what is more uncertain than the *Hypotheses*, that at this day we take so much delight in? Have they any thing else, for the most part, than meer Conjectures, which by their Similitude lead us to various and sometimes contrary Conclusions. The Excellent Art, which owes its Birth to a diligent, accurate, and judicious Observation of Nature, does not consist in the keenness of human Reason; but ought rather to be call'd, the Wisdom that's heap'd up in the various Labours of the Learned of all Ages, and the Judgments of many Men winded up as 'twere into one.



## IX.

'Twould be equally tedious and unnecessary, to relate the many and great Mischiefs that have accru'd to Physick, from the ardent and eager pursuit of new Hypotheses. I shall only instance in two things: In the first place, the most pregnant Genius's, when once tainted with these learned and ingenious Fables, are for the most part not only unwilling, but asham'd to condescend to the grosser pieces of Knowledge; I mean to observe the Qualities of Diseases, and the Vertues of Med'cines, and to try their Properties. In the next place, those Students who are possess'd with these feign'd and fabulous Opinions, make them so familiar by use and diligence, that afterwards in practising Physick, they make use of 'em not for Probabilities, as they did at first, but as certain.

## X.

We have hitherto bestow'd too much pains upon the Ingenious Hypothesis's of the Physicks, and the subtile Divisions and Definitions of Logick. Tho' our Art is illustrated by these, it does not depend upon 'em. Nature is its own Master, and lies more extended than to be confin'd within certain bounds prescrib'd by our scanty Reason. Corporeal Things are govern'd by an admirable eternal and constant Rule. So that if we mean really to do Mankind Service, and not to put upon 'em, we must of necessity have Nature's Laws in our View, meditate and make our Observations upon 'em, and Obey them to a nicety.

## XI.

XI.

'Twas not Vanity, or an Itch after popular Fame, that mov'd me to publish this little Piece; but a design of pointing out the Road, and in some measure fortifying it, to many of my Equals, that are wandering up and down. I am not Ignorant that many will Censure the Performance, such as 'tis. Some will Ridicule me for being daub'd over with Galenical Filth, and cry out that I have return'd like a Dog to the Vomit, and like a Hog to the Puddle. Others will brand me for an Empirick; or at least will charge me with Confidence and Precipitancy, in offering to make head against the unanimous Consent of all the Moderns. But the love of Truth, which from my Infancy has ever accompany'd me, and the advantage of promoting the publick Good, has inspir'd me with a contempt of these and such like Objections. For I should have been asham'd, if that Ancient Maxim, *Utilitate hominum nil debet esse homini Antiquius*, should have more influence upon the Heathen Sages, than upon a Christian Philosopher.

XII.

Those who oppose Reason to Experience, whether Empiricks or Rational Physicians, seem to me to be all Mad: For how can we make Reason to act all the Parts of a Science, that, as all wise Men ought to acknowledge, is acquir'd by Tryal and Use continu'd thro' a long progress of Time? And, on the other hand, why should Experience be only regarded, and Reason turn'd out of doors? Here, by *Reason*, I do not mean that Power of the Mind, which hunts after the



obscure Parts of Nature, and is call'd *Invention*; for that belongs to *Physicks*. I understand that Queen Reason, that is plac'd above all the rest, by which a Physician looks into the Principles and Causes of Diseases, foretells their progress and event, and gathers Futurities from what's present. Pray God these Controversies and Disputes among Physicians may, for the great interest of Mankind, especially of Christendom, be laid aside; so that *Physick*, which for so many Ages has been miserably toss'd, may repose in the quiet harbour of Tranquility and Concord.

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## C H A P. II.

*The Original, the Progress, and the certain Part of Physick, are owing for the most part to Observations.*

### S E C T. I.

**N**Ecessity gave being to Physick, and Experience brought it to Perfection. In its Infancy 'twas gross and stupid; but in the progress of Time, by the daily accession of new Observations, which mutually illustrated one another, and especially by the Light of Reason, which over-rul'd and moderated all, it became Liberal and Learned.

### II.

— The old Proverb, *Lapides ad filum, non vero filum ad lapides regere*, may be partly apply'd to the Physicians, who ought to model all their Reasonings,

sonings, which are as 'twere the Stones with which *Medicine* is built, according to the Thread or Line of created Things; for since the Line of Objects, which God has immutably stretch'd thro' the World, can't be bow'd or slack'd so as to be adapted to our Fallacies, 'tis necessary that the Ratiocination of Men should yield and be directed by this Line.

III.

The two chief Pillars of Physick are *Reason* and *Observation*: But *Observation* is the Thread to which Reason must point. Every Disease has, not a fictitious, but a certain and peculiar Nature, as well as certain and peculiar Principles, Increase, State and Declination. Now, as all these are brought about independantly of the Mind, so in tracing their Nature we have no occasion for a subtle and disguis'd way of Disputing, but only for a repeated and diligent *Observation* of what happens to the several sick Persons, and such an acuteness of Mind as is conformable and obedient to Nature's Measures.

IV.

It happens not unfrequently that the Event does not answer the Physician's Expectation, tho' supported by Reason and Experience; and that, not out of any defect in the Rules of this excellent Art; but either from the multiplicity and the almost incredible Number of concurring Causes, both Internal and External, or rather from the Negligence and Mistakes of the Patient, Nurses or Physician, in a faulty regulation of the Circumstances of the Cure.

V.



## V.

Many ascribe all to Reason, and nothing to Experience; and many again are on the opposite side. Now both sides are equally Criminal; whence sprung so many Divisions among Physicians, and such jarrings between the Theory and Practice. We are, and for ever will be, ignorant of the minute subtile Texture of the solid as well as the fluid parts of a living Body, which is altogether out of the reach not only of our Senses, but even of Reason. Experience likewise, uncondacted by Reason, is oftentimes fallacious: For which cause they will equally prove sources of Error, unless they mutually illustrate one another.

## VI.

Tho' we are altogether ignorant, wherein the disorder of every Part and the Nature of every Disease consists; yet we observe that each of 'em has its own form, *i. e.* certain measures of Decreasing and Increasing, or constant and determin'd Periods. That 'tis so, will manifestly appear, if we allow Nature to act of her own accord, and do not interrupt her by improper Administrations. When it happens otherwise, 'tis the Method of Cure and not Nature that causes it. For two Patients seiz'd with a Plurisie, (for instance) and treated different ways, by two different Physicians, will likewise have different Symptoms: So that if there be an Error in the Method of Cure, the Physician, and not the Disease, will be the Author of many Symptoms.

## VII.

VII.

If we compare *Hippocrates's* Aphorisms, Prognosticks, &c. with the Observations of later Authors, we shall plainly see that the Nature of Diseases is the same now as it was in the former Ages, and that their Periods observe the same order as formerly. From all these Premisses we may justly conclude, That Physick is not so uncertain, nor grounded upon such a slight Foundation, as 'tis commonly thought; but built upon certain Rules, confirm'd by repeated Experience: For the Observations which make the principal part of the Art, have the human Body for their Subject; the Motions of which, whether Natural or Sickly, have a stable Spring, and regular and constant Periods: So that the Advances of Medicine, being grounded upon such Observations, cannot but be certain and perpetual.

VIII.

*Hippocrates* being fully sensible of this, made it his whole Business to make just and diligent Observations; by the assistance of which he discover'd, that Diseases have some constant and peculiar, or individual Affections, and some adventitious and common to others. The constant sort depend upon the very individual and constant Nature of the Disease. The Adventitious spring either from the various Methods of Cure, or from the manifold and various Concurrence of Causes. The first of these he drew up in Aphorisms and Precepts, as being the Rules of the Art. The others he would not own for Precepts; but at the same time thought 'em not Contemptible, and left 'em to the Judgment of a good Man, *i. e.* an acute and prudent Physician.



## IX.

These constant Qualities, which might be call'd the Characteristick Signs of Diseases, are sometimes manifest and obvious to our Senses, and sometimes obscure, and such as we can hardly assign a probable Reason for. But let them be of what Nature soever, a Physician ought not to condemn them, but to mark 'em down faithfully with the same very Simplicity that they appear in. For as Indications of Cure are drawn from the least Circumstance, so all the minute, and even the obscure Motions of Diseases ought to be trac'd and described. By this Means, we shall have not only an absolute and perfect History of Diseases; but even the Method of Cure, which is of greater Moment.

## X.

'Twere tedious to recount all the obscure Motions that use to be observ'd in the curing of Diseases: But to set the matter in a clearer Light, we shall take notice of a few. To this Class belongs the Doctrine of Critical Days, or of the despumation of the morbidick Matter, perfected in a determin'd Time of a Fever; importing that acute Diseases terminate luckily in an odd Number of Days, and fatally in an even Number; and that Chronical Distempers terminate in an even Number, both of Days and Months, as the Ancients observ'd. Of the same kind are the occult Permutations, of Diseases among themselves, their Translation to one part rather than another, and the occult consent of Parts among themselves. Some secret Consent or Sympathy is

is observ'd between the Legs and the Breast, and between the Breast and the Privities. Inveterate Ulcers, Cauteries, and other Disorders of the Legs unseasonably or imprudently Cur'd, turn to pernicious Disorders of the Breast, as it appears from daily Experience. In the Diseases of the Breast, Diureticks and Washes for the Feet are useful, and Purgatives are commonly prejudicial. We have seen all the Pleuretick Patients recover, that are seiz'd with a pain and subsequent sup-puration in the inner parts of the Ear. Intermitting Fevers, that yield to no Digestives, Solutives or *Febrifuga*, are frequently Cur'd very happily by Bleeding in the *Salvatella*. A dry Cough is taken off by a violent Pain falling upon the Testicles. *Conf. 2. Epid. Sect. 5.* When the Testicle swells by a Cough, it recalls the Memory of the Society of the Breast, Dugs, Testicles, and the Organs of Voice. *Conf. 2. Epid. Sect. i.* If a Cough follows upon an Inflammation of the Testicles, the Inflammation ceases, and *e contra. Conf. 2. Epid. Sect. i.* A Dropsie of the Breast insues upon the Discussion of a *Hydrocele. Mear. Obs. Med.* When Sneezing precedes or follows Diseases of the Lungs, 'tis an ill Omen. *Conf. 2. Epid. Cap. 9.* Some periods of Diseases have likewise somewhat of a secret Sympathy, as well as the Exacerbations that rerurn at set Hours, pursuant to the Observations we have made in several Pains, as well as in Fevers and several other Diseases.

## XI.

When the Modern Physicians hear of these and a great many other things of the like Nature, they Laugh at 'em; and when they observe them, they Slight 'em, to the great prejudice of their  
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Patients. Many things that surpass our Comprehension are not to be contemn'd; but 'twould be a peice of Wisdom, while we cannot canvass their true Nature by Reasoning, diligently to take notice of the effects that appear outwardly, and from thence to form Precepts in order to Practice. For when the Human Reason Despairs, or is not sufficient for the unravelling of Difficulties, it uses to waste it self in giving a probable Reason for 'em, and spend its strength upon superfluous Things: Or, to speak in the Words of *Sir Franc. Bac. Fol. 293.* "When once Men despair of finding the Truth, every thing about 'em Languishes; whence it comes to pass that they rather turn aside to pleasant Disputations, and some superficial Views of things, than stand up in the way of a severe Enquiry". When Reason therefore is Blind in such difficult Matters, we ought to make Observations, and propose 'em to the Reader without any Disguises of Speculation; as *Asclepiadornis* in former times is said to have Painted happily without Colours.

## XII.

From what has been said, 'tis manifest, that not only the Original of *Medicine*, but whatever solid Knowledge 'tis entituled to, is chiefly deriv'd from Experience. As for the peculiar Cure of any Disease, as I take it, it will seldom succeed well, unless Reason be join'd to Observation: For the innumerable Causes of Diseases; the various Temperaments of Patients, the difference of Age, Sex, way of Living and Climate, the various Seasons of Years, and an infinity of other things that concurr towards the production or removal of Diseases; these, I say,

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do oftentimes so perplex and disturb the certain and constant Nature of the Disease and its Symptoms, that 'tis a hard matter to trace the Truth, unless the Complexion of them all be weigh'd and illustrated by a discrete use of Reason.

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### C H A P. III.

*Of the Impediments that have hitherto slackened the Diligence of Physicians, in making Observations.*

#### S E C T. I.

Supposing the foregoing advances to be true, or at least likely; It remains now to enquire into the Causes, that have hinder'd the Practice of Physick to arrive at its due maturity and perfection by the means of such a pursuit of Observations. As I take it, the chief Impediments that have slacken'd the Diligence of Physicians in making Observations, and by consequence have retarded the progress of the Practice it self, are these. The false Idols of Physicians, or the prepossession of false Opinions. A false kind of Analogies or faulty Similitudes. The preposterous reading of Books, and the fatal Itch of making Systems: And the Intermitting of the Aphoristical Way of treating Diseases. To set this matter in a clearer Light, we shall examine each of these Heads in peculiar Chapters. Several other Causes might be added to these above-mention'd, particularly the preposterous Methods of teaching Sciences: For since our Mind, when disengag'd from preconceiv'd Opinions, is first  
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of all subjected to our Preceptors, if it happens that they proceed Immethodically, or are tainted with Errors, or are dull injudicious Men; all these Infirmities being transfus'd to us, are so deeply rooted in our Minds that their Impression can never be defac'd, unless we be directed by the best Teachers or by Experience it self to the right way of Truth, and so unlearn all such things as have been the first and chiefest source of our Errors.

## II.

Our innate Temperaments do oftentimes oblige us to embrace Error, and make false Judgments of Things. Besides the Authority of *Galen* in his Book, *Quod animi mores corporis temperiem sequantur*; daily experience vouches for this Truth: Many Men otherwise Sagacious and Learned are enslav'd to some Opinions, the falsity of which is obvious to the most ignorant: Being drawn upon 'em by a natural byass of their Mind, they not only take 'em to be certain, but even cannot be took off from 'em by the most evident Reasons. This is manifest in the practice of some Physicians: One that is naturally Timorous and Melancholick, or Possess'd, as the saying is, of a frigid and humid Temperament, do's by the natural Habit of his Mind avoid Spirituous Volatile Med'cines, or such as operate with a forcible Motion; and attempts to cure all Diseases by such Remedies as are Moistening, Refrigerating, apt to pacifie the Humours, and, in a word, that are less Active. On the other hand, a Physician of a hot bilious, fierce or impatient Temperament, neglects the gentler and cooling Med'cines, and insists upon Volatile Spirituous Remedies, Aromatick Alcali's, Iron, Fire, Vesicatories,

teries, violent Purgatives, and such things as operate with the greatest force and activity. Now as their natural Inclination makes 'em prefer one sort of Med'cines to another; so it recommends to 'em some Precepts and Opinions rather than others, and sometimes this their Inclination is the standard by which they judge of Sciences. Wherefore if they do not take care to check that Inclination by attentive Meditation, and know how to make right Reason a directory for the inward Motions of their Constitution, they will be very obnoxious to the abovemention'd Errors and several others.

## III.

Among the sources of innumerable and pernicious Errors, this is not the least, that Men give more Credit to the useless Comments of their own Brains, than to Observation and the Cautions of Nature. And indeed while I consider that Nature is not subject to our controul, and that she performs her Motions in so occult a manner, that they can never be so easily trac'd as by Observation, and Reason retaining to Observation: And on the other hand, that Men talk of her as 'twere at pleasure by a certain impulse of the Mind; while I have these Considerations in View, I do not think it strange that false Conclusions ensue thereupon; and that the Cure of Diseases, grounded upon such Conclusions, do's not answer Expectation; but I wonder that the Errors springing from them should be attributed to the inconstancy and uncertainty of the Art, and not to these preposterous ways of Argumentation and Speculation. By this means it came to pass, that at this day

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many charge Physick with uncertainty, others deride the Doctrine of Prognosticks, others prescribe Remedies in a tumultuary promiscuous way at any time of the Disease, observing no Rules for Concoction or Crisis; a great many flight the Ancients, and give too much Credit to the Moderns, and a great many give no Credit to either. While they will not subject their own Humility to the Humility and Simplicity of Nature; but from judgments of her Effects by arrogant Theories, and imitate her by a sort of Jest; 'tis no wonder that being thus prepossessed with Errors, relating to the Cure of Diseases, they do not Kill, but Nourish 'em, and rather exchange than stifle 'em. These and a great many other Impediments of the Practice of Physick might be drawn up; but I purposely wave 'em, lest this Treatise should prove bulky and tedious to the Reader. 'Twill suffice therefore to take notice of the following Heads, which bear the greatest Figure.

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## C H A P. IV.

### I M P E D I M E N T I.

#### *The Derision of Ancient Physicians.*

**T**IS equally unworthy of a Man of Learning and Probity, and pernicious both to the Republick and to the progress of Letters, to deride the noted Performances of others, or indeed any Essay towards the promoting of Sciences. This is most notorious among the Medicinal Tribe: For the greatest part of their Writers,

ters, for almost these forty Years, have made it their Business to deride the documents of the ancient Physicians. And 'tis incredible how pernicious that has prov'd both to the Science and to the Lives of their Patients. Those who gave the first vent to this Error, I take to be *Helmont* and *Paracelsus*, who in order to raise their own Sect upon the ruins of the *Galénick*, not only charg'd *Galen* and almost all the Ancients with Error and Ignorance, but lash'd 'em with Calumnies and Taunts, in their Medicinal Writings. This Crime of Derision did not confine it self to these two Authors, but began to spread every Day, especially among their Followers, with whom 'tis still so much in vogue, that their chiefest Study is to accomodate their Discourses, not to the Nature of Things, but to the Affections of their Minds; so that their Opinions are not Modell'd by right Reason, but by the By-asse of their Mind.

## II.

Neither could those who mean'd to make themselves famous by new Hypothesis's minted in this Age, abstain from deriding the Ancients, and that perhaps for the same Reason that determin'd the former. The new Hypothesis's having their respective Followers, these thro' the influence of Faction and a customary Derision, have thrown many Aspersions upon the Ancients, whom they either never Read or never Understood. However, 'tis no matter whether these Things proceeded from the foregoing, or from private Causes; while 'tis certain that many Disadvantages have sprung from thence. The chief Disadvantage is, that when the derider do's not judge of things impartially, but according to



the prejudices he has imbib'd, with reference to the precepts concerning the cure of Diseases, which are fully explain'd in the Writings of the Ancients; in that case he must needs take them to be either false or useless, and so rob the Patients of the Advantage they might reap from 'em. Besides, they confide so much in their own Hypothesis and Opinions, that 'tis almost below 'em to condescend to Experience; or if they do, they either imitate Nature by their own Jest or make an unseasonable leap from a few scraps of Experience to general Axioms: And from these rather than from *Phænomena* diligently observ'd, they draw Arguments concluding upon the hidden Cause. I pass over a great many inconveniencies of this Nature, accruing to Physicians and the Science they profess, and much more to the sick Persons, from that scandalous Crime of Derision; which are all obvious to any Man that Reasons Justly and Sincerely.

### III.

To speak more particularly of the Ancients, I reckon 'em much worthier of Praise than of Derision and Calumny: For, besides that they laid the first Foundation of the most Excellent Art; they have weigh'd and examin'd the Nature of every Disease so diligently, and enrich'd the true Practice with such valuable Accessions, that we have but small hopes left of ever going beyond their sublime Performances. Tho' some of the *Galenicks* are too ready to fall in with less constant and uncertain Theories, yet the whole School of the Ancients ought not to be promiscuously charg'd with Ignorance and Folly: For the *Galenicks* of former Ages had some Plea to be

be somewhat addicted to these Theories, in order to humour the Genius of the Age in which they flourish'd, as well as the barbarous Comments of the *Arabians*; especially considering that the Springs of the *Grecian* Medicine with which the Physicians water'd their Grounds, were, thro' the silence of so many Years, either quite dry'd up, or corrupted by Sophistical Additions. But even in those very Times, many of 'em seeing through the inconstancy of their Theory, bent all their Thoughts upon the Diagnosticks, Prognosticks, and Cure of Diseases, *i. e.* upon solid Practice; and what noble progress they made in this Design, is sufficiently manifest, from the incomparable Cures and Rules, with which they have adorn'd their Books. Now the Moderns shew so much malignity in Detracting from these great Men, that they are not ashamed to expose not only their Theory, but even their Practice, to open Derision; and being every day harden'd in this Opinion, they choose rather to Err along with those of whom they have conceiv'd a good but false Opinion, than to be wise with Men of Learning, of whom they have not so good an Opinion. They run down *Galen* very unjustly, and throw such impudent Reflections upon him, as if he had been the worst and unjustest of all the Men that either now are, or ever were: To do this, and at the same time to cry up the Moderns in one place for Gods, and in another place for Princes of the Sciences, is not the part of a prudent Man, or one that judges justly. Let me therefore earnestly intreat Physicians, hereafter equally to peruse the Modern and Ancient Authors, and to mind nothing more in the perusal than their Rules and Cautions, the approv'd Remedies, and such like solid Things,



which are perpetual, and of some Use and Vertue in this our common Sea of Mortality: As for the other things which are more abstracted, and will never profit any Body, I would have 'em entirely overlook'd, and set apart for popular Sermons.

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## CH A P. V.

### IMPEDIMENT II.

*The false Idols of Physicians, or the Prejudice of false Opinions.*

#### S E C T. I.

THE third stop of the Practice of Physick, is the false Idols with which a great part of Physicians, especially in this Age, are Enchanted; and acting up to their Measures distracts and clouds the Sense of the Soul and of Nature; by which means it comes to pass that Judgments are not form'd in conformity to right Reason, but pursuant to the prejudices of the Mind. Out of so great a croud of Idols, the following which occurs to my Memory, shall suffice. A great many have such an Affection to some one Remedy, that they think it alone entitl'd to a Sovereign Vertue and Power of Curing almost all Diseases; either by reason of a lucky event observ'd once or twice to enlue upon the use of it, or rather by reason of a certain innate propensity that they have not only of crying up some Medicines, but of ascribing 'em Fictitious Vertues. We see some Physicians recommend

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Milk and Whey in all Diseases; others spirituous and volatile Remedies; others Acids and Alkalies, and others again Purgation and Bleeding. In fine, every Physician cries up a great many particular Remedies of this Nature according to his own Genius or the Accidents of his first Practice; and imprudently throws away the rest, tho' never so much Approv'd and Beneficial. Some are mighty Favourers of some Theoretick or Practical Proposition, which they have either suck'd from Books or invented themselves; and model all the Rules of the Cure of Diseases by that Proposition. 'Twere in vain to spend time in mustering up all the erroneous Advances of this Nature; since they are obvious to any one that seriously considers the Performances of the Moderns, who have almost sunk the Practice of Physick, by following that Maxim of minding only a few things and pronouncing accordingly.

## II.

Many Physicians of this Age reckon Bleeding, Blistering, Purging and other *Galenick* Remedies, at once superfluous and pernicious. This puny Thought was first launch'd by *Helmont*, and having made various illusions in the straits of an inconsiderate and interrupted Experience, has gain'd a wonderful ascendant in the Minds of the Moderns, who being fond of Novelty, rail very haughtily, and to the infinite loss of their Patients, against the use of such Remedies. Others take all Diseases to spring from an Acid, and pretend to Cure 'em by Alkaline Remedies; this way of Cure being the easiest of all, and apt to be learn'd in a few days, by every silly old Woman, do's at present prevail beyond the others.



But the Physicians that are ignorant of the *Hypocratick* Maxim, that there are a hundred things that injure a Man, seem by that Method of Cure rather to form Conjectures upon Diseases, than to make any certain Discovery; of which more largely hereafter. Some are wont to exhibit a Purge in the beginning of all Diseases, in order, say they, to carry down the preceding Matter that feeds the next. Many Physicians do steadfastly adhere to this munky Advance that was hrtch'd in the Schools of *Abraham*; and to take 'em off of that Opinion, neither the repeated Observations of the Ancients, with reference to the Season of Purgation, nor the very Example of the divine old Gentleman, who never used Purgatives in the beginning of Diseases, but when the Matter was Turgescent, are of any avail. But in earnest, Purgatives being apt to renew the Fermentation, do sometimes by a concealed Heat, actuate the crude Matter that was formerly lock'd up in Retreats: And by that Means do either exasperate or duplicate Fevers, or recal them when they are upon the point of going off.

### III.

Among the apish Advances that impose very much upon Physicians, we must reckon in that of those who imagine, that no Man can arrive at the perfect Knowledge of Practice, without a previous Acquaintance with other Sciences, namely, Logick, Mathematicks, the various Idioms of Languages, Rhetorick, Astronomy, &c. the Knowledge of which, and a great many other things of the like Nature, would indeed  
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prove a considerable Ornament to the Profession of Physick; but in my Opinion, they are as conducive to a circumstantial and exact History of Diseases, as the Art of Painting is to a Musician: For Experience justifies, that the old *Galenicks* who were scarce acquainted with the Latin Tongue, could Cure Diseases as happily, as those who are given out for the greatest Masters of Sciences, that have no tendency to the Cure of Diseases. This Custom introduced in latter Times, has given Rise to several Absurdities in the way of Physick; especially this, That the spending a great part of Time in the Acquisition of the abovementioned Sciences, leaves but a insufficient Portion of Time for the first Elements of Practice: Besides, these Physicians boast of their being Astrologers, Poets, Criticks, Historians, Philosophers, Men well versed in the Greek and Hebrew Languages, &c. But when they are privately called to give an Account of what our Ancient Oracle leads to, I mean the Knowledge of our selves, the Arguments they offer are jejune and useless. For this and several other Reasons being render'd incapable of compassing a solid Practice by the help of Observation, they presently learn the Idea of some general Hypothesis, and attempt the Cure of all Diseases by general Propositions, some Theoretical and some Practical. Now these things are only like Apparitions in the Surfaces of things, swimming as 'twere and struggling in the Waters, and 'tis no wonder if they at first view screw up their Hopes, and afterwards disappoint them.



## IV.

But to proceed more regularly in pursuance of this Argument, we must distinguish the History of Diseases, or the *Medicina Prima*, from the Cure of Diseases, or the *Medicina Secunda*. The History of Diseases is a particular Science of a peculiar Form, which does not owe its Principles or Improvement to other Sciences, but to the purest and most sovereign Fountains of Nature; by Vertue of which, it is entituled to Perspicuity and Fidelity: Or to speak more plainly, the whole History of Diseases depends upon a diligent and patient Description of all such things as the Learned Observator has mark'd down concerning the Invasion, Progress and Exit of Diseases, and committed to writing, with the same simplicity and sincerity that he us'd in observing them, without adding any thing of his own, or of the Doctrines of Books and other Sciences. Now, the Infancy of Physick, which owes it's first Nurishment to the History of Diseases, cannot be confounded and tyed up to the Rules of other Sciences, without demolishing the very Foundations of the Divine Art it self: In effect, all that part called the *Medicina Prima*, which is the Basis of the *Medicina Secunda* or Curative Part, ought to be treated of so as that it be derived from the true Nature of Things, and not from the Nature of our Thoughts, as many have done: I mean, that its Improvement must not be carried on by Arrogance and Pride, but by various Labours, by a patient Enquiry, and an anxious and cautious Fidelity in making Observations.

## V.

As for the *Medicina Secunda*, or the Curative part, I must needs own, that it may be illustrated in several points by the knowledge of other Sciences; especially those which bear any affinity to Physick, or are look'd upon as retainers to it. Such are Chymistry, Botany, the Doctrine of Diet, Exercise, and the fix not Natural Things, Experimental Philosophy, Anatomy, and other things of that Nature, which contribute very much towards the perfection of *Method*, and a ready view of the Indications of Cure, even upon the minutest Circumstances. For Method being, as 'twere, the Architecture of the Physical Structure, and the Basis of Cures, cannot be compleat, unless its Parts be mutually perfected by the means pointed to in these Sciences; and so joyntly conspire in an Unity of Truth and Nature. As for the other Sciences, which are not at all related to Physick, I shall not deny but that the ways of Thinking may be improved, and the Office of a Professor adorn'd by the Study of the Mathematicks, which our Countryman *Martinus Ghetaldus* has accurately pursued in his learned Performances, *De compositione & resolutione Mathematica*, and his *Appollonius Redivivus*. To these we may add the Knowledge of Meteors, Astronomy, Eloquence, or the Art of Perswading, Moral Philosophy, especially that part of it which treats of the forming of a Man's Manners, and the acquisition of Prudence, which is so necessary to a Physician, &c. But in regard they have no tendency to the Curing of humane Bodies, they are only to be pursued at leisure Hours in order to divert and unbend the Mind.

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For as either the Body or the Mind is weakned and wore out by over-struggling, so they are mightily refreshed and corroborated by a seasonable rest and relaxation.

## VI.

They are much mistaken who think they can cure Diseases happily, because they are Masters of the Theory; for a Physician ought to have much higher Things in his view, in order to clear the innocent Art from the Calumnies it lies under, and restore the Sick to a healthy State. He must dissect the Bodies of those who dye of Distempers, and fowl his Fingers, to the end he may find out the seat of the Malady, the Cause, and the issue of antecedent Symptoms; and, in fine, the event of all the Effects taken notice of in the foregoing Disease. The sick Persons Excrements and Urine, his Tongue and his Eyes, his Pulse and his Face, the Affections of his Mind, his former Way of living, and the Errors he has been guilty of in the way of Conduct, and such other Circumstances ought to be diligently considered, in order to trace the genuine and natural Diagnosticks and Prognosticks of Diseases, and the indications of Cure. To frequent or boast of splendid Closets, to heap up great Numbers of Books without using 'em, to make a Figure at Universities, and have a name celebrated in the modern Journals of the Learned; this, I say, will contribute nothing towards the appeasing of the pain of Diseases. But that End will be effectually compass'd, if you frequently visit the Publick Hospitals and nasty Beds of the Sick, and with an austere fearless Patience observe what good or ill happens in the several Periods of the Disease, how the Symptoms make their  
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progress, and what Event follows the administration of such and such Remedies; whether the present Disease is turn'd into one of another Form; what Benignity, Malignity, Vehemence, &c. appears in the Disease and in its Symptoms, thro' all their Periods; what Method of Cure is found to be standing and perpetual for each Distemper. I say, 'twill be of infinite use to make Observations of these and a thousand such things which have a more intimate relation to Nature, and rather distinguish than split and rend its parts.

## VII.

The desire of vain Glory, has in all Ages put Physicians rather upon the forming of Sects, than the daily discovery of new Phenomena's, to illustrate and confirm the History of Diseases. Thus they've moulded the Nature of Things at pleasure; and almost overturn'd it with their indigested Meditations. And upon that score 'tis no wonder that the patrimonial fund of Med'cines is impoverish'd, and its flourishing State disturb'd by a multitude of useless Books. The followers of those who instituted Sects, being misled by a vain Reverence, or scar'd by Laziness from the trouble of a narrow Enquiry, chose rather to affect the fame of a subtile Interpreter, a nimble Antagonist, or a methodical Abridger, than to fix the Diagnosticks, Prognosticks, and Cure of Diseases upon their own Observations. In a word, they acted the parts of a Master and an Auditor, and not those of an Inventor, and the Person that adds to what is already invented.

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## VIII.

Of the Precepts for Life and Manners, those are the best which are publick and common, and universally acknowledg'd by all Sectaries, whether Peripateticks, Academicks, Stoicks or Cynicks. The Physicians of this Age, ought to mind that Saying of *Seneca's* concerning Manners; for the Precepts of Practice that they give out now adays, are neither General nor Common to each Sect, namely, the Galenical, Chymical, Mechanical, &c. (as *Hippocrates's* Works are) but are chiefly confin'd to Particulars, and not confirm'd by any History or matter of Fact. When they see a thing succeed once, they fancy 'twill always be equally successful; but the process of Time giving them a fuller View of the Matter, they find it to be uncertain, and confin'd to a particular Case, instead of being Universal and Perpetual. The modern Paradoxes, the mutual Animosities of the late Physicians, the Number of Books which those of our Family have indiscreetly Published, concerning the uncertainty of Physick: These, I say, are full Proof, that the Rules of modern Practice are not general, or confirm'd by a full Convocation of Physicians, but contriv'd at every one's Pleasure, either out of Hatred to an opposite Sect, or the love of their own, it being Customary among 'em to defend and promote the Glory of their respective Sects with all their Prowess; or else they are contriv'd thro' a want of Sense and Thought, or a crowd of Prejudices, or an Affectation of Novelty, which in this Age has been foolishly coveted; or the false Influence of Precepts and trifling Books, or thro' the Contempt of a  
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Neighbouring Physician &c. So that we can never have any great Hopes of the increase of Physick, till all its Sons joyn into one Family.

## IX.

Ignorant Physicians are oftentimes impos'd upon, by the abusive Accusation of a fictitious sort of Malignity in Diseases. They do not imploy their Diligence in tracing the Antecedent Causes, Symptoms, and whole State of the Disease; and by that means commit great Errors in the way of Cure, which exasperate the Disease, that of it self was mild and gentle; and upon that, they impute the Exasperation to a certain latent Malignity, that in my Mind is merely Fictitious. In the mean time, they cannot tell where the Nature of that Malignity lies, and so e'en Aquiesce in the Popular Opinion, that the Malignity of the Humours must be attacked by Alexipharmical and Heating Med'cines, and thrown out by Sweating. But after copious Sweats, this Malignity is somtimes so far from being removed, that the Latent Inflammations of the *Viscera*, which for the most part are the Genuine Cause of such Fevers, are thereby increased, and the Patient's Illness is inflam'd. Some latter Physicians, after a narrower Enquiry into the Accidents, accompanying the Fevers that are commonly call'd Malignant, have discover'd, that all of them do chiefly depend upon a double Cause, namely, the Coagulation and Dissolution of the Humours: And the Method of Cure must be altered, pursuant to the Variety of this preternatural State of the Humours. As Cordials, Spirituous, and heating Med'cines, are convenient for Malignant Fevers arising from a Coagulation,



lation, so they are highly Pernicious in those which proceed from a Dissolution; in which Case the Temperate Acids, the Emulsions of Seeds, the Gellies of Harts-Horn, and such like moderating Things are only proper, for curbing that dissolving and almost inflammatory State of Blood. Now, since the above mentioned Med'cines operate by a manifest Quality, inabling them to Dissolve or Moderate; I hope none will deny, that such Fevers are like-ways produced by a manifest Cause. So that the fictitious Notion of Malignity tumbles down of its self. But after all, I don't deny, but that there are some Fevers which are truly Malignant, being produced by an Air and Humour allyed to Poyson, and scarce perceivable by our Senses, such as that which takes rise from the deprav'd Qualities and Influences of the Air, corrupt Food, poysonous Animals, and such other Causes. But that sort of Fevers is very unfrequent, and not near so common as most Physicians imagine. I pass over a great many other Prejudices that impose upon Physicians and cramp true Practice, lest I shou'd tire the Reader, or fall upon Tautologies.

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## C H A P. VI.

### O B S T A C L E III.

*False Simile's, or a false sort of Analogies.*

#### S E C T. I.

**A**S Arguments drawn from Similitudes are the easiest, so they are the most apt to draw fallacious Conclusions, unless they be very  
Regular

regular and just. And the Impatience that Physicians shew in their Enquiries, is manifestly owing to nothing so much as the false Similitudes, that they encourage so much, both in curing Diseases, and in forming a Judgment of them. A Similitude that concludes Perfectly, ought to relate only to things that fall under one *Genus*, as to Plants and Plants, Minerals and Minerals, Animals and Animals, &c. so that all the several Attributes of one thing may be verified of the other to which it is compar'd: For otherwise, the Conclusion will be imperfect for want of a sufficient Enumeration of the Parts, and from thence mighty Errors will spring up. If any one shou'd compare *Alexander Farnesius* to *Cesar*, the Comparison wou'd be Just, for they were both Men, and both of them Great Generals in their Time; and the Attributes of the one, are exactly suitable to those of the other. But if he shou'd Assimilate *Farnesius* to the Sun, the Similitude wou'd be extravagant, and too far fetch'd; for that the Attributes of the Sun, cannot be absolutely verified of *Farnesius*. Now this is the true State of the Similitudes, us'd commonly in Physick.

## II.

Those who argue by way of Analogy from the Anatomy of Insects to that of Brutes, and from this to the Anatomy of Men, are excellent Philosophers, for as much as the Terms of the Similitude are all confin'd under the *Genus* of *Viventia*, and after a sufficient enumeration of the parts, the Attributes of the one are exactly answerable to those of the other, so that the Anatomical Observations made upon Brutes have not only given great light to those made upon hu-



man Bodies, but are exactly of a piece with them. Nay, so certain and constant is that mutual Analogy, that from thence the circulation of the Blood, the structure of the *Viscera*, and an infinity of other things have been discover'd, to the great happiness of the Age we live in. In like manner, those who argue from the *Mechanicks* and upon divers Rules of the *Mathematicks*, relating to the *Statics*, *Hydraulicks*, the force of Heavy Bodies, &c. conclude upon the structure of a living Body; these I say reason justly, because the human Body is calculated by Number, Weight and Measure, not only as to its structure, but as to the Effects that depend upon it. Such was the Will of the Supreme Creator of the Universe, who to subject the Body to the easier sway of the Mind, seems to have drawn the most regular Series of Proportions and Motions, in the human Body, by the sole Pencil of the *Mathematicks*. Since the Analogical Argumentation of Anatomy and *Mechanicks*, has a great relation to the Cure of Diseases, and concludes with more certainty than the other *Hypotheses*; 'tis certain that the Famous *Tozzius & Borelli* at *Naples*, and *Bellini* at *Florence* could not have done better service to our tottering Theory, than by applying Anatomico-Mechanical Rules in explaining the Effects of Diseases: Upon which Head their learned Performances deserve to be read, the Writing of which has contributed so much to the Glory of our Country and profession, and the Benefit of sick Persons. But those who reason from the effects of Minerals in a chymical Furnace, to the effects observed in the Body of an Animal, do not only conclude in a lame imperfect way, but give occasion in a flaming degree to those pernicious Errors, which un-

justly

justly disturb our Modern Physick: their Conclusions wou'd be juster, if by the *Anatomia Infusoria* they threw in Chymical or Vegetable Liquors into the Humours of living Animals, and made their Remarks upon the Effects arising from such Mixtures.

### III.

'Twere tedious to give in a List of all the false and almost popular Similitudes, made use of by our modern Physicians in the Cure of Diseases. How pernicious was that Similitude which *Hellmontius* first invented, in order to dissuade the vulgar People from Bloodletting. The Simile I speak of was this; As Water boyling in a Kettle can't be cool'd by the taking away of the boyling Water, but by the removal of the Fire underneath, so in a Feverish ebullition of the Blood Bleeding will not lessen the Heat, and that End will only be compass'd by the Evacuation of the Morbifick Cause, by Sweat and other ways. At first View this seems to be a compleat Similitude, but for as much as it ranges beyond the Sphere of the mutual *Prædicatum*, it leads Practitioners to great Errors. For, to pass by all other Reasons, our Feverish Flame is mixt and exactly united to the Blood, and not put under the Veins like Fire under a Kettle; so that when part of the Blood is removed, the Febrile Flame is at the same time likewise impair'd. However, tho' the Solid Arguments of Mechanicks and Experience advise us to a prudent use of bleeding in Fevers, yet we do not recommend it in all Fevers, but only in such as threaten great Evils, by reason of an overboyling of the Blood, or too great a Quantity of it, or the commencement of a stagnation in any Bowel. The fatal Symptoms



ensuing upon these Causes and prevented by Bleeding, are chiefly, Deliriums, Watchings, Inflammations of the *Viscera*, Anxiety of the Breast, Difficulty of Breathing, stopping of the Liquids that circulate in any *Viscus*, breaking of the Vessels, and a thousand such like Accidents. Nor does Bloodletting only suppress the above-mention'd Accidents, but likewise reduces the boiling Mass of the Blood to such a Mediocrity of Motion, as is sufficient for a seasonable depuration and secretion of the peccant Matter.

## IV.

The same *Helmontius* has invented another Similitude that's equally liable to the same difficulties. 'Tis this. As a Fever occasioned by a Thorn in the Finger can't be extinguish'd without pulling out the Thorn, so all other Fevers will never be cur'd, unless the Thorn of the peccant Matter that irritates the vital Spirits, be carried off immediately by Diaphoreticks, Purgatives, &c. without expecting any Concoction. Now, besides that there are a great many Fevers, that are not produced by such a sensible Thorn of peccant Matter, particularly those which take their rise from Anger, Venery, Passions of the Mind, &c. These Diureticks, and Purgatives exhibited in the beginning of acute Diseases, in order to throw out that imaginary *Spina*, have no other effect than that of robbing the Blood of its serous Part that dilutes and tempers it, and so disposing it for Coagulations and more fatal Ebullitions. Hence 'tis no wonder, what we see every day, the Symptoms of acute Fevers, and the Fevers themselves are, to the infinite danger of the Patient, exasperated after an unseasonable use

use of Diaphoreticks and Purgatives. The other Similitudes so familiar to Physicians in the explication and cure of Diseases, are liable to these and other Difficulties. Such is the Similitude of the heat of Things that putrify in Moisture, with respect to the heat of Fevers, which the *Galenists* falsely supposed to take their rise from putrifying Humours ; but that Opinion being sufficiently confuted and exploded by the Moderns, I pass it over in silence. Add to this, the Similitude of the Head of an Alembick converting the Vapours to Water by its refrigerating Vertue, made use of in explaining a Catarrh, which was thought to be occasion'd by the refrigerated Brain, its converting the Vapours that ascend from the *Viscera* into a tough pituitous Humour : The Similitude of the Brain suppressing the Spirits by its Frigidity, and so causing Sleep : The Similitude of the vulgar Suctions, Attractions, and Excretions, brought in upon the explication of the natural Effects of a living Body. These, and an infinity of other popular Similes are much esteem'd by ignorant Physicians, who calculate the cure of Diseases not by Dogmatick Laws drawn from Nature's Storehouse, but by the Measures of some fictitious or imperfect Similitude, after the manner abovemention'd.

V.

Tho' I have hitherto given an ill Character of the abuse accruing from fictitious Similes, continued down from the Ages of Barbarity to this we live in : Yet I would not have any one to think, that I condemn the use of arguing by way of Analogy or Similitude ; but only that I want to see 'em manag'd with more Judgment, especi-



ally, when the cure of Diseases is regulated by 'em. For all the discoveries of natural and experimental Philosophy, and even Medicine itself, for this last Age, are owing to Analogy and Induction; not such as I disprov'd in the foregoing Examples, but such as is perform'd by an entire enumeration of the Parts, and confirm'd by a long and manifest Series of Experiments, and which affords general Axioms collected from it, like the Whole from its Parts, which give a perpetual Stability to the truth of the Science, and chalk out a sure and constant Method of Practice, rendering the Practitioners steady and fearless in fixing the cure of Diseases: So that analogical Arguments are better calculated, than all the other ways of arguing, for improving the Arts comprehended under the natural Science, especially Medicine; partly because Analogy is a retainer to Nature, and as 'twere mix'd with it, and partly because it discovers the transition of Opinions into Error more manifestly, than the other Species of Arguments.

## C H A P. VII.

### O B S T A C L E IV.

*The preposterous reading of Books.*

#### S E C T. I.

ONE will never make any progress by the reading of Books, unless he first fixes upon a method of Reading. A tumultuary and inconsiderate way of Reading, accompany'd with an insatiable Desire, does but cloud the Mind: but  
when

when 'tis seasonable and considerate, and attended by the Conversation of Learned Men and the Use of Experiments, it becomes fertile and useful. For as over-feeding does not improve Health, neither does insatiable Reading enlarge solid Knowledge. And 'tis for this reason, that those who consider but a few things with Prudence, not only judge more perfectly of things, but give their Sense of them with greater readiness and facility. I own, that we owe a great deal of our Improvement to Books; but before we can reap from them any plentiful and compleat Benefit, we must be a long time diligent in discovering and surmounting the Errors that Authors are usually liable to, and with which they taint our Minds, and seduce 'em from the Paths of Truth. By the reading of good Books we are quickly benefited; but by the perusal of sorry ones we Unlearn, instead of Learning.

II.

As for my part, I do not mention this, as if I meant to give Laws to Mankind, with reference to the reading of Books. My View is to take notice of some Errors, that frequently fall in the way of those, who apply themselves to the perusal of Books in a preposterous manner, and without due Caution; for this is a source of infinite Inconveniences, accruing not only to the Readers, but to the Sciences. Some read in a tumultuary confus'd way, others with a contradicting Humour, and others again forgetting their Liberty, cling to the Opinions of Authors like enchanted Rocks, taking their Nod for Reason, their Orders for Laws, and their Responses for Oracles. But to come to the Matter itself.



## III.

Those who apply themselves to several Sciences at the same time, are wont to form their Judgments of one by the Precepts and Rules of another, especially that in which they take most Pleasure: Thus, among the Ancients, *Aristotle* form'd his Assertions of natural Things from the Doctrine of *Dialectick*, and *Plato* took his Measures upon the same Head from abstracted and theological Idea's, as *Proclus* and his Associates did from the Rules of Mathematicks. Physicians, in like manner, are wont to covet the Knowledge of other Sciences besides that of the cure of Diseases, and if they happen to pursue one of these Sciences with too much eagerness, they presently judge of Practice, and the cure of Diseases, not according to the regular Rules of Practice, but according to those of the beloved Science, which they cry up, not in private only, but in Writings exposed to the publick View, as being highly necessary towards the carrying on of the cures of Diseases. Whether this Vice is to be imputed to the Age, or to the Authors, I shall not determine: But 'tis certain, that a'most all the Physicians of this Age are tainted with it, and that it has brought the Sciences into great disorder. Upon this View, *Cardilucius* in the Preface to his Practice inveighs somewhat warmly against the Anatomists, for pretending that the cutting of the small Fibres is so necessary for reaching the History and cure of Diseases; whereas, as he says, after the spending of these last fifty Years in Anatomical Dissections, the History of Diseases is not more exact, nor their Cures more solid, than before. As *Cardilucius* censures the Anatomists for raising such

such high pretences upon the Dissections of minute things; so 'tis observable that the Chymists have regulated the History of Diseases by a few Experiments taken from the Furnace, the Coiners of new Systems by their Sophisms and new minted Words, and the Mathematicians by Circles and Lines. But I leave it to the Learned to Judge what the effect of that may be.

## IV.

Farther, Those who read Books, use to employ their Memory more than their Reason; they seem chiefly to aim at the Learning what this or that Author advances, and are altogether Ignorant what Sentiments they ought to form to themselves upon the bottom of their own Experience. If we look a little narrowly into the Writings of some of our modern Authors we'll find, that they value themselves upon a long Genealogy of new Opinions, and a medley of various Colours, but not upon any design of making new Discoveries, or confirming former Inventions. Now, I cannot assign any other Reason for this, but that incredible Inclination for Reading and almost Dying upon Books; or rather their Laziness in never using their own Reason, or consulting Experience. And hence it comes to pass, that the more they read, the more confus'd they are in their Sentiments of things; and their Confusion throws them headlong either into Scepticism or Madness. For since the Capacity of the Brain is not Infinite, 'tis no wonder that the innumerable Impressions of Idea's are mutually confounded, and take the Mind off from just and distinct Judgment; by which means Men coming to a disuse of their  
own



own Thoughts, contract an Impotency of ever using them. This sort of Men, who imploy their Memory more than their Reason, use to be of a stately supercilious Temper, and are apt to arrogate to themselves a right of determining every thing: And indeed nothing less can be expected of 'em; for that false sort of memorial Knowledge (if I may so call it) puffs up the Mind, and entitles them to a sort of shining Quality, with which they are wont to anticipate those who mean to oppose them, especially if it is accompany'd with an imperious Boldness, and a formal Gravity of Speech.

## V.

There are a great many Men in the World, that imploy their Neighbours Strength and not their own in their enquiries after Truth. In the common Actions of Life, they always make use of their own Eyes; but in tracing the Nature of Diseases, they seldom or never have recourse to their own Reason. A peaceable Assent to a probable Thing, and a want of Skill in making Experiments or forming just Judgments, which many Physicians have contracted for want of that sort of Exercise from their Youth; this, I say, keeps many at a great Distance from the Knowledge of the Truth. These Men confound Truth with Antiquity, and Falshood with Novelty. New, and even True Discoveries they brand as false, and cry up the falsest of the Ancient Assertions for Truth. The Circulation of the Blood, the Discovery of the Lacteal and Lymphatick Vessels, the Structure and Use of the Nerves and *Viscera*, and a great many other modern Discoveries confirm'd by the constant  
Voice

Voice of Nature; even these, they stand not to Censure and Abuse, and that for no other Reason, but because they are new. On the other hand, the Rottenness of the Humours, the Sanguification-Office in the Liver, the Authority of the first Qualities in producing and curing Diseases, and the other Opinions of the Ancients, which for several Ages have rendered ineffectual the noble Efforts of a great many for enriching the medicinal Field, and have tainted their Minds with false Prejudices; These they keep close to, because they pleas'd the Ancients, and claim a Title of Antiquity.

## VI.

Farther: The same very Men are such great Admirers of the Ancients, and account 'em so Praise-worthy in all kinds of Arts, that they think we have no room left for Inventions, nor no ground to hope for any Improvement. But their Mistake is sufficiently made out by the present Age, which has gone beyond all the Ages within the Records of Time, in the Glory and Multitude of Inventions: Nay, the steadiness of Nature in her Operations is further evidence for this purpose; for by an immutable eternal Course she displays an admirable Constancy and Equality in all her Offices; so that I cannot understand how it should come to pass, that this Age should produce a Generation of Men more dull in the way of Invention, or slower in their Apprehensions, than those of former Times. But the matter lies here: 'Tis not the Genius's and Judgments of Men that are grown Old, but their Industry and Application; for the force and edge of the Mind is only broke  
by



by Idleness; and old Age that overtakes every thing else, has no influence upon the Genius, which is fortified by the strongest and almost immortal Bonds of Nature. Now, if we understand this aright, 'twill plainly follow, that the edge of our Apprehension is not only equal to what the Ancients had, but wou'd far exceed it if it were but whetted by Exercise; and that Antiquity or Novelty do's not raise the value of things, so that the Ancients are rather to be imitated than superstitiously admir'd. Not that I have any Prejudice against the Thoughts of the Ancients, or mean to depreciate them upon a Point that has procur'd 'em so much Glory: For as I have all along followed their unequal'd Industry in enriching the Practice of Physick, so I am infinitely sorry that in these Times we are fallen into such Straits, that being destitute of the Supports in which the former Ages abounded, we are at a loss to know how to promote the Art of curing Men. And tho' many of the Ancients draw a Curtain before the Eyes of their Readers, yet their Writings have some scatter'd Sparks, which, if carefully observ'd, would set their Precepts in a clear Light.

## VII.

But least any of the ignorant Tribe, should falsely charge me with the dissuading of young Men from so useful and laudable an Exercise, as the reading of Books; I think my self oblig'd in this place to confess Ingenuously, that, as I owe to the reading of Books some Progress in the way of Physick, which, tho' small, is not hurtful; so I shall ever exhort and encourage young Men to pursue and cultivate the same Study.

dy. However, that they may avoid those Sands upon which I have oftentimes necessarily struck, I think it proper to give them a few preparatory Cautions. In order to reap a speedy and compleat Advantage by the reading of Books, they should always read the approv'd Authors; and if there's one approv'd beyond all the rest, they should never want him out of their Hands, as containing the Sum of all that Wisdom, which they'll scarce ever find in a hundred Authors of an inferior Character. For a Proof of this, let's pitch upon the learned *Sanctorius*, who by his golden but small Treatise, *De Medicina Statica*, has done more Service to the common Interest of Mankind, than a thousand other Authors in a thousand Volumes, who by pilfering from one another, and so running as 'twere in a Circle, have expos'd to the publick View a deplorable plenty of Words, rather than any eternal Monument of their Industry. You cannot profit by reading without you understand what you read; and what you understand, you must not give your Assent to it, till you consider whether 'tis true or false. Make use of your own Reason in resolving the Questions you see perfix'd in the Titles of Books, and by joyning Experience to your assiduous Reading, endeavour to make a just Judgment of every particular. For unless Reason directs your Studies, Study will not only fail in perfecting your Reason, but will blunt it, and seduce it from the right scope of your Labours. To dwell upon Books till one is almost dead and languishing, speaks a specious and empty Laziness; to abuse them in a softer way, signifies Ostentation and Ignorance: For 'tis well known that Letters perfect Nature, and 'tis equally known that Letters are perfected by Experience;  
and



and when they enjoin some general things, unless these be determin'd by Experience, we shall never compass the wish'd for End. 'Tis manifest from Experience, that those who Die as 'twere upon the reading of Books, become stupid and unqualified for all the other Actions of Life; nay, that is not all, by reason of their perpetual abstraction from Things and the confusion of their Idea's occasion'd by over-reading, they are incapable to serve either themselves or the Commonwealth. On the other hand a great many Men that have read but very little, have always been esteem'd and admir'd by Men, because they form'd their Thoughts and Judgments of Things with Prudence and Sagacity. When you find your self indispos'd for Study, that is, when you have not a chearful Desire and Inclination for't, abstain from it at that time; for tho' you then read a great deal, you'll get but little by't. Wherefore, that such a Space of time may not be spent in vain, imploy it either in conversing with learned Men, or making Experiments.

### VIII.

Your cunning Men use to despise Letters, and simple Folks admire 'em; but prudent Men take the middle way, and only use 'em so far as their Publick or private Necessity requires. To read Books with a design of contradicting, or for an external Ornament, or to assent to all their Precepts promiscuously without any Examination, speaks an Affectation of Knowledge, rather than true and solid Wisdom. For as much as the whole Practice of Physick is couch'd in Cautions and Precepts confirm'd by long Experience, and these are apt to slip out of one's Memory,

mory, unless they be carefully fix'd in it ; 'twill therefore be proper for a young Student to have by him a Manuscript divided according to the Titles of the most remarkable Things ; under which, he may mark down the Sentences of greatest Moment that he meets with in Books, and which he may always be reading over at his leisure Hours ; by which means these Sentences and Precepts being more firmly riveted in his Memory, will improve and perfect the Mind, so that he will intrepidly go about even the most difficult Cures of Diseases. The Writings of approv'd Authors, ancient or modern, which treat of nice Subjects, are not only to be read once, but over and over again, and always consulted ; so that our Mind may be as 'twere new modell'd according to their Pattern. Authors of lesser Note are only to be read here and there ; or if they are read over, it must be without dwelling long upon 'em, or losing much time. And as for the Books of the lowest Form, we ought to read 'em only in Epitomes drawn up by a Fellow-Student or an Amanuensis. By this means we shall acquire an extensive Knowledge of Sciences and Learning, without any great loss of Time or Health. In the mean time, let's consider of what use the reading of Books is, to those who are already imbarqued in the Practice of Physick.

## IX.

No Age ever produc'd such plenty of Medicinal Books as this we live in ; and yet none is so deficient in Practical Observations. If we take a careful View of some of these Authors, we'll perceive either a nauseous repetition of Things



Things said before, or an excessive Ostentation of Novelty, or an indiscreet Mixture of ancient and modern Advances; and we'll find that more of the Discourse is spent upon Contention and Difference, than upon the Tryal of new Things. An Author of a new Book, who perhaps has but a small Stock of Reason to back his Assertion, is not afraid to censure and depreciate all the Reasons that others, tho' Men of Learning, have produc'd in confirmation of the same Position. This he do's to enlarge the Weight and Authority of his own Advances. If from those Books you lop off the festival and exotical Inscriptions, the Philology, Citations of Authors, Ornaments of Discourse, Fallacies, Superstition, and such other vain Accoutrements, you'll leave but little behind; nay, instead of the true Treasures of Wisdom, you'll find nothing but Shadows and Chimera's. Since therefore the assistance of Books do's but little Service in determining a compleat and standing History of Diseases, we must pass to those Things which have a closer Coherence with Nature, namely, Experiments, Observations, Dissections of dead Bodies, Botanical Gardens, and Chymical Furnaces, which unfold to us the true meaning of Nature, by making divers Observations upon it, and variously splitting and torturing it. Every young Student knows that he can't find a more learned Book than the Patient himself, whose Disease will quickly and faithfully lay open to the diligent Observer a great many Things worthy to be known, that perhaps a tedious Course of many Years Reading would not bring to his Knowledge. The Patient affords a true and lively Description of the Disease; but Books make fictitious and deprav'd Histories, by a redundant Jargon of Fallacies

lacies and vain Speculations. However, in order to pass from the confus'd labyrinth of Diseases, and open the Way that for so many Ages has been stop'd up, one must not satisfy himself with the Observation of a few sick Persons, but must with equal constancy and ardour of Mind, extend his Observation to great Numbers.

X.

From what has been said, 'tis an obvious Inference, that those Physicians who are noted for great Learning, and an eternal dwelling upon Books, are seldom successful Practitioners ; nay, they can never judge justly of the Practice, 'till they make it their only Business, and continue in it for some time. We have a pretty Story to this purpose recorded by *John Huartius, Scrut. Ingen. cap. 12.* " When the *Arabian Medicine*,  
 " says he, flourish'd in our Country, a Physician  
 " likewise flourish'd, who was much celebrated  
 " for Reading, Writing, Arguing, Distinguishing,  
 " Answering, and making Conclusions ; and in the  
 " performance of all these Offices was so Eloquent,  
 " that his Audience affirm'd, he could not only  
 " cure Diseases, but even raise the Dead to the  
 " fellowship of the Living. But after all, when  
 " he apply'd himself to Practice, scarce any of  
 " his Patients escap'd the Fate of expiating the  
 " Professor's empty Knowledge with their own  
 " Death: Upon which the Professor, not knowing  
 " the genuin Cause of so many unlucky Events,  
 " and fearing his Reputation and Interest might  
 " in time suffer by 'em, bid adieu to the World,  
 " and ended his Days in a Convent." The same  
 Author has another Story that is yet more ap-  
 posite to our Purpose. " A certain Physician,  
 E " says



“ says he, privately importun’d me to tell him  
 “ how it came to pass, that he who had long  
 “ Study’d and perfectly learn’d the Art and best  
 “ Rules of Prognosticks, as deliver’d in Books,  
 “ was always disgracefully mistaken when he ap-  
 “ ply’d ’em to his Patients, and cou’d never come  
 “ the length of prognosticating the Truth. So  
 far he. ’Tis agreed upon by the most judicious  
 Authors (as *Huartius* observes in the place above  
 quoted) that *Hagenterius* surpass’d *Galen* in redu-  
 cing the Art of Physick to a more perfect Me-  
 thod; and yet ’tis said of him, he was so un-  
 happy in curing Diseases, that most of his Pati-  
 ents either dy’d under his Hands, or fell into in-  
 curable Distempers: Upon which account his  
 Countrymen were so frighten’d, that they ceased  
 to imploy him. ’Tis needless to draw out of  
 Authors further Examples of this nature, since  
 every Day furnishes us fresh Instances. Your  
 Physicians therefore that are extream Learned,  
 and over-forward in Philosophy and Theory and  
 like Spiders are always spinning out Wisdom  
 out of their indigested Thoughts; these  
 Men, I say, will never prove good Practitioners,  
 unless they subject themselves wholly to Experi-  
 ence, and a continued course of Practice: For  
 Diseases are of a hidden abstruse Nature; they  
 work out their Effects by such secret Ways, and  
 so remote from human View, that ’tis very hard  
 to trace ’em without diligent Observation. This  
 made *Hippocrates* cry out so often in his Works,  
 that there is something of Divinity (θεῖον) in  
 Diseases: And if we consider either the Structure  
 of the Body, or the Original and Causes of Dis-  
 eases, or the Effects of Remedies, we’ll still find  
 reason to cry out with *Hippocrates*, ὃ θεῖον; nay,  
 a singular happiness in curing Diseases, speaks  
 some

some divine thing in the Physician himself; for your Men of ordinary Learning have that *εὐσυχία* in tracing Diseases and applying Remedies, that the most Learned do sometimes fall short of. We conclude, therefore, what we have already prov'd, that a Physician, tho' admirably well skill'd in the Sciences, and acquainted with Books, will never be a good Practitioner without Observation and Experience in the way of Practice. If any one speaks or acts against this Position, certainly Nature will object to him, what the Ancients did to the *Dialecticks*, viz. My Son you come from the University, you breathe Pride from an empty Cabinet, from an unlearned Breast.

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## CHAP. VIII.

### OBSTACLE V.

*The preposterous reading of Books, and the pernicious Custom of making Systems.*

#### SECT. I.

IN order to vindicate the true way of Interpretation, in opposition to false Interpreters, 'twould be necessary to pursue two Arguments, one against the false Interpreters of Diseases, and the other against those of Books. But in regard that most of this first Book is taken up in correcting and restoring the true Interpretation of Diseases, which for the most part is now corrupt and deprav'd; it remains only that in this Chapter we should point to the Errors of the Interpreters



of Books, and the Humours and Imaginations that prevail within them.

II.

I never think of that fatal Day, on which Medicine and the other Liberal Sciences being trampled upon by the *Barbarians*, fell into the hands of the *Arabs*, but it overwhelms me with Grief and Regret. For as that was the first Date of the Acquaintance of the *Arabs* with the *Grecian* Books, so all their Commentaries upon 'em are rather the ridiculous Genealogies of useless Opinions, than the genuine Sense of the Author: And this false way of Interpretation serves not only to raise their Authority, but to stifle all further Enquiries. For Proof of this Assertion, we need only to cast our Eyes upon the Ages that succeeded the *Arabian* School, in which the bewitch'd Physicians did nothing but skip and gad round the narrow Circles of the *Arabian* Commentaries; and thus spending all their time in canvassing the Works of a few Men, fell into almost a total disuse of Thinking. 'Twas by those Means that so many vain Comments, and such an infinity of capital Errors crept in upon Physick; and so the noble Art, which had in all Times been the Governess of Health, became a mean Waiting-Maid to Factions.

### III.

Those who undertake the Interpretations of Books, endeavour to usher in their Commentaries with all sorts of Panegyricks upon their Authors, especially if they are Authors of the lower Form, or such as need no Commentaries; and giving a

full

full range to all the measures of Selfconceit, are not afraid to fasten upon 'em the Epithets of *Divine* or *Admirable*, or *the Miracle of their Age*, and to recommend the Matter they treat of, as being the product of a Divine Genius, and of the highest Importance to all the Members of the Republick. Now 'tis not the necessity of vindicating or promoting the Glory of such Authors that prompts 'em to this Practice, but a hidden Itch of procuring the Applause of Learned Men upon the Plea of commenting on first Rate Authors. *Mundinus's* Anatomy, if compar'd with our modern Anatomy, is as far short of it as a Flea is of an Elephant ; and yet not only *Cardanus*, but several other Learned Men, have plac'd their Glory in crying it up with the highest Elogies, and gracing it with the highest Commentaries. The reason that induced *Cardanus* and others to such Undertakings, seems to be only a vulgar Slothfulness in never trying their own Strength, nor daubing their hands in the Dissection of Bodies ; the Consequence of which was, that *Mundinus's* Text pass'd among 'em for an unshaken Truth : And for the same Reason Practitioners being scar'd, either by the inconstancy of Success, or by the severity of patient Observations, apply themselves at last, not to the Discovery of the *Phænomena* of Diseases upon their own Bottom, but to the Interpretation of useles Books. *Hippocrates* the great Parent and Preceptor of Physick, did not behave himself so, for tho' he perceiv'd with Indignation the obscurity of Diseases, and the difficulty of making Enquiries, and bit upon the awkward Thought as upon a Bridle, yet he dived into Nature, and with a fixt Resolution pursued the proposed End ; till at last, by an indefatigable



Patienee in the way of Observation, and by the Importance of his Discoveries, he gain'd the Ascendant of all the Physicians that the Records of Time can reach. And as the Anatomists of the Age we live in, by a narrower Scrutiny into Nature, and the frequenter Dissection of Corps and living Animals, have discovered that *Mundinus's* Interpreters knew but little of Anatomy; so, if any spark of Truth should be added to Practice by this Method of ours, after I have made my *Exit*, it will give succeeding Ages to know how wide those Physicians are of the true Practice of Physick, who prefer the barbarous Commentaries of the *Arabians*, to the Study and Practice of their own Observations.

## IV.

Sometimes Commentaries are obscurer than the Text; and that because they either don't know, or else condemn the true Rules of Interpretation. He who undertakes to Interpret Books, ought to be furnished, not with a vulgar and superficial, but with a solid and deep Knowledge of the Subject he pretends to explain. Just as the Criticks do, who before they pretend to unlock the obscure places of Poets or Historians, spend a great part of their Time in purchasing the Knowledge of the Customs, Wars, Ways of Living, and other Circumstances of the Age in which the respective Authors flourished. Now in order to comment upon Books of Practice, I look upon that Knowledge to be necessary which is the product of long Practice and patient Exercise. This Thought is justified by three of the greatest Interpreters that ever were, namely, *Duretus* and *Martianus* among the Ancients,

cients, and among the Moderns, the celebrated and learned *Lucas Tozzius* present Physician to his Holiness; each of whom spent the greatest part of their Life in exercising Practice, before they attempted to comment upon *Hippocrates's* Works: For that Author's Works being nothing else but the pure Juice of Practice, a suitable Interpretation cannot be derived with more Certainty from any other Source than the very exercise of Practice. So that 'tis no wonder that the Commentaries of a Person whose Knowledge is superficial and not very near allied to the Subject in hand, should prove more obscure than the Text. A great many usurp the Name of an Interpreter, who in effect are unworthy of that Title; for upon a narrow view of their Commentaries, we don't meet with the Explication of an obscure Meaning, such as is necessary to let the Reader into the Author's Sense; all their Periods are stuffed with a bulky show of Learning, an ostentation of the *Greek* or *Hebrew* Language, and an infinity of Quotations of Authors and Sentences that have no useful relation to the Subject: Besides, the Text is sifted and explain'd, not according to the ballance of Truth, but pursuant to the measures of the Prejudices to which those quoted Authors or the Interpreters themselves are liable.

V.

Commentaries do oftentimes fasten several Opinions upon their Authors that they never so much as dreamed of, with a design either to proclaim to the Learned their Acuteness in the way of Commenting, or rather to favour the Rules of that Hypothesis to which they have retained



from their Youth. Now since Interpreters lie under these and other Errors, and are so far different from the other three we commended but now, we had better construe Authors according to our own Sense, than crowd and disturb our Mind with foreign Fallacies. For sometimes the Avenues and Passages of the Mind are so obstructed by the obscure and irregular Idols of Commentaries, that they can scarce afford clear room to the genuine and natural Rays of the History of Diseases, which dart in upon us from Observation. But after all, by this way of speaking I don't mean to scare Physicians from writing Commentaries, but only to oblige 'em to do it with Judgment. In earnest, when I sometimes consider of the Cause that has laid such severe Fetters upon the Practice of Physick, and hindred its progress from its present deplorable Straits into the wider Bounds of Nature, I have nothing else in view but the preposterous way of Commenting, and the tedious and unnatural Study of Physicians in prying into the Works of the *Arabians* more than into those of Nature: For that Method of Studying having reign'd for these two last Ages in a'most all Universities, and there being no body to give the seasonable Admonition, 'tis no wonder that Physick being by this means pluck'd up from its Roots, does at this Day neither exert its Power, nor grow up like a thriving Plant; but, on the contrary, breaks thro' and overturns the Judgments of Nature, by the shadows of Words, by popular Observations, and by noble Experiments turn'd into a fabulous Theory.

## VI.

These and such like Absurdities will be avoided by those who heedfully mind the following Cautions. In commenting upon Practical Books we should take the Interpretations of Nature for a Pattern ; and upon that score we may imitate the incomparable Interpreters of *Hippocrates*, whom we commended above, and who have retriev'd the primitive Majesty of genuine Commentaries and laid it open to Posterity. We ought not to run too far out in Panegyricks upon our Authors, but to observe a Regard to the opportunity of Place, Time and Merit ; and where our Adversaries have spoke well, we ought not to tarnish their Sense by a malicious Interpretation. We should neither design Violence nor lay Snares against the Judgments of Men, by foisting in Disputes that are remote from the true sense of the Text, and are design'd rather to procure Praise and Veneration to ourselves, than to unfold Obscurities. Our Interpretations must be free of that Confusion which oftentimes breaks the Thread of the Doctrine and of the genuine Sense ; for the Truth will sooner shine out of Falshood than out of Confusion. The Idols of the Mind, the Prejudices of *Hypotheses*, and Preconceptions drawn from other Sciences, must be entirely laid aside ; by which means we may easily discover the mutual transitions of Errors into Truths, and Truths into Errors. A Commentator must be indifferent as to Novelty and Antiquity, neither of which is to be laid in the Ballance with Truth ; for what is Ancient or Modern, is not therefore true or false, as some Physicians imagine, who by that means give rise to



to Dispute and Contention. The Author commented upon, ought to suffer neither Detraction nor Addition, but to be presented entire and like himself; nay, his Meaning should be so exprest, that his own Virtues may speak his Praise, and his own Vices proclaim his Disgrace. It must be exprest Word for Word, and the very local position of the Words must sometimes be retain'd, especially upon a Matter of great Importance and Obscurity, such as we meet with in several Texts of *Hippocrates's* Works. An Interpreter must not assume the Office of a Judge, so as to reject what he does not like, and substitute his own Advances in their room: And indeed the greatest part of Interpreters are guilty of this Crime, by which, as any Reader may easily perceive, all Sciences, and especially Physick, have been much injur'd. Farther, An Interpreter must avoid contradicting the Author; and he must not be too apt to doubt. Indeed upon the obscurest Texts, he may proceed like the Academicks in making Queries of every thing, and affirming nothing for a certainty, till after a long and patient Consideration; and if, after all, he can't come at the sense of the Text, he had best leave it untouched, to be examined and explained by some happier Genius. The Interpreters who are arm'd with those and the like Cautions, will do Justice to themselves and their Authors, and happily go through their Task. Having thus detected the Errors of Interpreters, our Method would lead us, in the next place, to fall upon those who obstruct true Practice by the coining of new Systems: But in regard we have allotted a whole Chapter for that Subject, in the latter part of this Book, we think it more proper to wave it at present.

## C H A P. IX.

## O B S T A C L E VI.

*The discontinuing of the Aphoristical Way of treating Diseases.*

## S E C T. I.

**A**Mong the Hindrances that have retarded the progress of Physick, that is not the least, which consists in tying it up to Methods, and in digesting and adorning it with abstracted and useless Notions. For that methodical Way gives out the Science to be entire and reduc'd as 'twere to a *ne plus ultra*; the consequence of which is, that Men are rendred not only less industrious in hunting after new Discoveries to illustrate and enrich the History of Diseases; but likewise so self-confident, that they fancy they have already reach'd the very bottom of the Science. And tho' it sometimes happens, that a new and useful Observation may fall in their way; yet upon the consideration that they cannot accomodate it to their Method and Way of Division, they throw it away and condemn it as being foreign to their Profession. This makes it out, that our Ancestors behav'd themselves more prudently. They knew very well, that Method and regular Partitions might illustrate and enoble Med'cine, but at the same time they were sensible, that at that rate it could not be confirm'd, or arrive at a higher pitch. Accordingly, whatever Discoveries they made upon Diseases by a long course of Observation, these they threw in-  
to



to Aphorisms or short Sentences, ty'd up to no Rules of Method or Scholastick Subtilty, but clearly and openly deliver'd. By this means they chalk'd out to Posterity, both the naked Images of Inventions, and the void Spaces left for the insertion of the new and ever multiplicable Voïces of Nature. Now, this so necessary a way of promoting Physick, is at this day quite in disuse. For the modern History of Diseases, tho' at first view it may seem to be copious, yet in effect 'tis barren and unprofitable; nay, if we consider the tedious digressions to Philology, the superfluous Narratives, the hungry Questions, and such other Trifles that accompany it, 'tis really infirm and corrupt. For, if we except those few Observators who have mightily enlarg'd the boundaries of Medicine, by a diligent and natural description of the Medicinal Cases and Histories; all that the rest have added, with relation to their false Theory, and such other Trifles, has rather cramp'd than promoted its progress. Now the way of setting down the solid and repeated Observations of Diseases in a short and aphoristical Stile, will sufficiently appear from the succeeding Diseases, which were examin'd by patient and repeated Observations made in the *Italian Hospitals*.

### *Of a Pleurisy.*

#### I.

If you would discover a Pleurisy, place your chief Care in observing the nature of the Pulse. The hardness of the Pulse is almost an infallible Sign of all Pleurisies; and while the Pleurisies are sudden,

sudden, or complicated with other Diseases of the Breast, if you observe a hardness in the Pulse, *i. e.* too great a distention or vibration of the Artery, tho' the other Signs are absent, you may assure yourself that the Patient is under a Pleurisy; for a hard Pulse is an inseparable Companion of all Inflammations upon the Nerves or membranous Parts.

Having thus discover'd the Pleurisy, during the whole course of the Cure, mind nothing more diligently than the difficulty of Breathing; for the Pleurisy is more or less hazardous according to the greater or lesser difficulty of Respiration.

A good Respiration is a good Omen, but a bad one is always to be dreaded. Thus we find that Respiration is rendred more difficult as the Pleurisy increases, and upon the approach of Death 'tis difficult to the last degree. But Prognosticks taken from the Pulse are not so certain; for in the Diseases of the Breast, nothing departs sooner and more easily from its natural state, than the Pulse. I have frequently observed an Intermitting Pulse in a Pleurisy, without any danger; and once or twice I order'd Bleeding, notwithstanding the Pulse was in that condition, because the Indication of Bleeding was too urgent.

Such Pleuritical Persons as were seiz'd with a Pain in the inner part of the Ear, followed by an Imposthume and Pus, were all cur'd, pursuant to my repeated Observations in the *Italian Hospitals*; but especially in *Rome*, in the beginning of the Year 1694, at which time the Winter was severe, and attended with Frost and Snow, which in *Italy* are unwonted, and that gave rise to raging Pleurisies.

After



After the cure of a Pleurisy, if you observe a little tickling Cough, and a gentle Heat over-running the whole Body towards the Evening, you may prognosticate either a Relapse into a Pleurisy or a Suppuration. I have found this noble Precept of *Aretæus* to prove true in several Cases, where I predicted accordingly.

Such Pleuritical and Peripneumoniacal Persons as spit up nothing, are in a hard Case, unless they void Urine plentifully. *Hipp. 4. acut.*

In the *Roman* Climate Bleeding is the principal Remedy for a Pleurisy, after which diluting Medicines, joined to attenuating and anodine Ingredients will quickly set it off.

Sometimes little Tubercles or small Swellings will lie hidden in the Lungs for several Years, without annoying the Patient sensibly; and will at last discover themselves after the cure of a Pleurisy, or a Quinsy, or a Fever. Therefore, if after the cure of any Fever the Patient is seiz'd with a Pain in his Side or Back, or any other Part of the Breast, together with a difficulty of Respiration, so that he cannot breathe without keeping his Neck upright, in that Case the Tubercle is turn'd to an Inflammation, and tends to Suppuration, which must immediately be taken care of. This Caution of *Dodonaus's* I have observ'd to be just in two Instances in the Hospital, after having dissected their Corps and considered all Circumstances.

In a Pleurisy, when an Indication of dissolving appears, Camphyr and the Remedies prepar'd from it, are almost an infallible Secret for performing that Office, especially if the Pleurisy is epidemical and malignant, or rather occasioned by an extraordinary thickness of the Blood. If the same Indication continues, about an Hour after  
the

the exhibition of the camphorated Medicine, let the Patient drink a pectoral Decoction of the Roots; *for instance*, of Masterwort, Angelica and Coltsfoot, and the Leaves of Scabious, Coltsfoot, &c. The Decoction must be drunk not only warm, but very hot, that the elastick and active Parts of the Roots may be convey'd in a full Stream with their entire Vertues to the affected part of the Lungs. The exhibiting of Liquors very hot is to me a secret for dissolving stubborn Viscosities in an epidemical and malignant Pleurisy, as well as in all other Diseases of the Breast proceeding from the like Cause. For I have seen Patients in a manner livid for want of Respiration, who have been quickly relieved by repeated Draughts of a pectoral Decoction taken down very hot.

As the accession of a Looseness is healthful in the Diseases of the Head, so 'tis very pernicious in those of the Breast, especially if they are acute. For this reason, we must avoid Purgation in a Pleurisy, and take care the Body be not render'd too soluble by a repeated use of Glysters; for by these means the Disease will be exasperated, the Spitting suppress'd, and the Symptoms will be inflam'd to the Patient's ruine.

After the cessation of the Pain of inflam'd Parts, (especially in the case of a Pleurisy or the inflammations of membranous Parts) if the Fever still continues, or increases, being attended with a low, intermitting and frequent Pulse, cold Sweats, &c. 'tis a fatal Omen; for in twelve Hours time the Patient will turn Delirious and soon after expire; the Inflammation having terminated in a Gangrene. This Caution we owe to *Hippocrates*, and I have seen three Instances confirming it in the Hospitals.

Pleu-



Pleurisies are frequently unperceiv'd, because they are Painless; and this gives rise to gross Mistakes in the way of Practice. In order to discover these occult and indolent Pleurisies, make the Patient lie down upon his right or left Side, and after he has fetch'd his Breath with force, and cough'd once or twice, ask him if in Breathing or Coughing he felt no Pain or Heaviness in any part of his Breast; and assure yourself that a Pleurisy is seated in that place where he feels the Pain or Heaviness. By discovering Pleurisies in this manner, I have benefited many Patients.

The Relapses of Pleurisies are, almost all of 'em, mortal, according to *Hippocrates*; that is to say, if the Pain and Fever having ceas'd, for instance, on the fourteenth Day, return again on the twenty first, or any other Day, that Relapse *Hippocrates* calls Mortal. But if only the Fever returns, without any Pain in the Side, the Case is not so desperate. Tho, after all, the Relapses of Pleurisies are always to be dreaded.

When an Inflammation of the Pleura or Tubercles in the Lungs, terminate in an Imposthume which turns to Pus, then a violent continual Fever is followed by an intermitting Tertian or Quotidian, commonly about the seventh Day, which is a certain Sign of the beginning of the Imposthume; as the learned Dr. *Morton*, in his noble Treatise of the *Phthisick*, gathers by Experience out of *Hippocrates*.

Pleuretick Persons are happily cur'd by meer Expectoration, and whoever goes prudently about that, will quickly find that the Pleurisy gives way: For Sweating and the other Evacuations are not so beneficial, because they do not evacuate the affected Part.

If the Spitting commences before the 4<sup>th</sup> Day, it shortens the Distemper according to *Hippocrates*; for after the 4<sup>th</sup> Day, the Patients Strength being exhausted, and the Spittings being thicker, they are not so easily brought up, upon which the Disease is inflam'd.

Those who exhibit Purgatives in the beginning of Pleurifies suppress the Spitting, and inflame both the Fever and the Distemper. And those again who give strong Diaphoreticks in the beginning, occasion a Delirium, or some other vehement Disorder of the Head.

In the regular Discussion of a Pleurisie, the Fever ought first to cease, and then the Pain of the Side; but if after the cessation of the Pain, the Fever remains or increases, together with the other Symptoms, the Patient is in a bad Condition.

If in a Pleurisie the Spitting returns after 'twas once stop'd, and is of a reddish yellow Colour, never prescribe Bleeding; for after Blood-letting the Spitting will stop, and the Patient will die. Of which I have seen four or five Instances, in the Hospital.

If after a regular Spitting, the Patient spits no more, tho' the Heaviness and Pain of his Breast continues, 'tis a pernicious Sign. 'Tis certain that no Pleuritick Person was ever cur'd whose Pulse was very hard, and for that reason small, and very frequent. *Galen. lib. de Præcogn. ex Pulsu* and in several other Places.

In a Pleurisie Loosenesses are pernicious; in which case I have frequently exhibited the following Bolus with very good success; Take of *Requies Nicolai* and Diaphoretick *Antimony* of each a Scruple; mix and make Pills to be taken at Night. For the Opiat stops the Looseness,

F.

and



and the Antimony throws out the Humours to the Skin, pursuant to *Hippocrates's*, Maxim, *Alvi laxitas, Cutis Densitas*; when the Belly is loose the Pores are stop'd, and *e contra*: Wherefore, if the beginning of a Pleurisie is attended with a Looseness, prescribe the foregoing Bolus immediately; and after the Looseness is stop'd, order Bleeding if there be an Indication for't.

In the beginning of a solitary and exact Pleurisie the Spittings are but very Scanty, the Pulse hard and frequent, and Respiration short.

If a difficulty of Breathing and Expecterating happens on any Day, whether the 2<sup>d</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 7<sup>th</sup>, &c. either before or after Bleeding, I presently clap a couple of Blisters to the Legs, pursuant to *Hippocrates's* Caution, *In Pulmonis quicumque tumores sunt ad crura optimi sunt*. I have still observ'd, that the Application of these Blisters promotes the Expectoration, facilitates Respiration, and stops the Looseness, if there be any; and soon after the Patient recovers.

In a Pleurisie, Peripneumonia, and such other Inflammatory Diseases, if the Blood drawn out of the Vein, has not a white Crust on its Surface, 'tis a pernicious Sign; for in that Case, the Substance of which the Crust is compos'd, remains in the Lungs, and stuffs 'em up; upon which the Fever, Inflammation, difficulty of Breathing, and other Symptoms do quickly increase. If at the second Bleeding this Crust begins to appear, 'tis a good Omen: But if it does not appear, even then you must give over Bleeding, or else you'll kill your Patient: For repeated Bloodletting robs the Blood of its more volatile Part, and so disposes it the more for Coagulation. This Caution was communicated

to me by the Learned and Humane *Lancisius*, formerly Physician to *Innocent XI*.

Such Pleuritick Persons as have a noise of much Phlegm in their Breast, a sad Countenance, and a golden Tincture upon their Eyes, are in a desperate State. *Hippocr. Coac.*

In the Declension of the Pleurisie, if the Abdomen sometimes swells with Wind and sometimes falls, 'tis a good Sign; for commonly the Patient is cur'd about the 10th Day.

### *Of Fevers in General.*

In the beginning of acute Fevers abstain from Purgatives, and from over Volatile and Violent Remedies; for the Disease being yet Crude, you'll either throw out what is not to be evacuated, or inflame the Fever, or stifle the Patient.

Let no Catharticks or violent Diaphoreticks be given before the 7th Day; for the peccant Matter is yet Crude, and mix'd with good Juices, and does not yield to such Remedies till the Signs of Concoction appear.

In continual Fevers, if the Vessels be over turgid, if the Blood runs impetuously to the Head, Lungs and other Members, and threatens a Phrensy, if Youth and a hot Temperament be added to the other Symptoms; in this Case be sure to let Blood in the beginning, that is, before the 7th Day, and repeat the Blood letting according as the Symptoms require: For the Vessels being by this means empty'd, and the Mass of Blood as 'twere loosen'd, you make way for the Diaphoreticks, Purgatives and such precipitating Remedies as are proper in the Status or Height of the Distemper.



If you have the least suspicion of a Malignant Fever, occasion'd by a Coagulation, avoid Bleeding like a Plague.

I have observ'd that Vomits are more or less proper according to the Variety of Countries and Climates. At *Rome* we do not find 'em so safe in Fevers, as others do in the Northern Countries; so that in prescribing Remedies, you must always have in View the Nature of your Climate, and the Temperament of your Country-men; and never prescribe out of Books without a nice regard of these.

In acute Fevers, the Physicians are blamable for two Things, namely, a confus'd and over-bulky medley of Medicines, or else unseasonable and immethodical Administration. Hence is it, that the Patients lye under so many Inconveniences, that the Periods of Diseases are so various and inconstant, and their mutual Permutations Incredible. These the Ignorant Physicians impute to the Nature of the Distemper, and not to their unsteady and speculative Methods of Cure: But time will undeceive us yet further.

In this Climate (*Rome* I mean) I commence the Cure of acute Fevers with Bleeding, and not with Purgation, unless it be attended with an excessive Vomiting, or usher'd in by an immoderate Repletion: And I have frequently observ'd, that immediately after Bleeding there insues a sort of Sweat to the ease of the Patient.

An exquisite semitertian Fever is very common about this Town; nay, it reigns almost at all Times: Which *Galen* was not Ignorant of, when he liv'd at *Rome* near *Minerva's forum*, in the Street that leads now to *Agrippa's Pantheon*,

in the Reign of the Emperor *Antoninus*, a Prince to whom not only *Galen*, but the whole Republick of Physick, are considerably indebted. 'Tis said, that when *Galen* made the first *Theriaca* at *Rome*, to the great Satisfaction of the People, this Prince presented him with a Golden Chain, and a Medal with the following Inscription,

ANTONINUS ROM. IMP.  
GALENO MEDIC. IMP.

But to avoid Digressions : Experience is witness, that *Semitertians* are very brief here ; and *Galen*, as I said above, affirms the same thing ; *de loc. com.* 25. and *de morb. temp.* towards the end. And now that I am speaking of a *Semitertian*, 'twill not be improper to insert the Words of the Learned *Fontanus* upon that Head, which you may read in his Commentary on *Dodonæus*.  
 “ This Fever, says our Author, affects the Ven-  
 “ tricle, especially its Nervous Parts, and the  
 “ Liver ; and for that Reason I think 'tis justly  
 “ listed into the number of mortal Diseases.  
 “ Oftentimes it degenerates into a Hectick, or  
 “ brings on a Dropsie, by reason of the great  
 “ Obstructions ; as *Hippocrates* observes, 1 *Epi-*  
 “ *dem com.* 3. *Aph.* 5. &c. This Fever is very  
 “ common among the Clergy, the Nobility and  
 “ the Courtiers ; among Young Men, and such  
 “ as lead a slothful Life, whilst they live high ;  
 “ among those who Pamper and Humour them-  
 “ selves too much, and among the Inhabitants  
 “ of hot Countries ; in pusuance of which,  
 “ we find they're very frequent in *Æthiopia*  
 “ and *Italy*.

Now a *Semitertian* advances in this Order. A fresh Paroxysm attacks the Patient every Day ;



but one day 'tis severer with a redoubled Shivering, and the other 'tis milder as every one may observe. 'Tis a long and dangerous Disease, and commonly attacks Men or such Youths as are upon the Borders of Manhood, and that in the Autumn. The Stomach is chiefly affected; and the other Symptoms are sometimes a Lethargy, sometimes Watchings, the Tongue dry and parched, &c.

Since I am speaking of Fevers, I can't but mention my Surprisal, in seeing most Physicians derive the Origin of Fevers from an Acid, and endeavour a Cure by Antiacids, to the great Detriment of the Patient. For if we take a right View of the Matter, we shall find that *Alcalies* variously alter'd, are rather in the Fault; for whatever is done in a living Body, especially in the Blood, is brought about by Fermentations, which being repeated again and again, rais'd to a higher pitch, or unduly alter'd, produce Plenty, not of Acid Parts, but of an *Alkali*, Lixivious, Sharp and Calcin'd Salt, or the like: This we observe chiefly in Fevers, in which we meet with manifest Marks of Sharp Alkaline, Lixivious and Calcin'd Salts, and oftentimes make a happy Cure only with diluting Med'cines, qualify'd with a gentle Acid: Witness, the Ardent Fevers. For this Reason, I can't but extol the Sovereign Virtue of the *Clissus* of *Antimony*, which by its subacid Quality stifles in the Bud, many Fevers occasion'd by a change of Air, as well as others of a more ardent Nature. The Fevers that rage at *Rome* in the Summer Time, upon the change of the Air, (not to mention the Errors of Diet, that are frequently committed in rambling out to take the Pleasure of the Country, which frequently gives rise to these Fevers, without any influence

influence from the Air) the Summer Fevers, I say, proceeding from a change of Air, are produc'd not by Acid, but by Alcaline sharp Salts; for the various Particles of the Earth and of Minerals, being rais'd up into the Air by the Heat of the Sun, are there attenuated by the Accession of fresh Heats, and so cohobated and volatiliz'd as to assume an Intense Volatility and an Alcaline sharp Nature, rather than an Acidity. The Particles thus Volatiliz'd, being communicated to the Blood by Inspiration, do first dissolve its Mass, and the Dissolution is presently followed by the Effects of Coagulation. For the Truth of this we Appeal to Experience; For Acids, even those of the strongest Class become either sweet, or insipid, and *Alcali's*, after a Fermentation, whether rais'd by the Sun, or occasion'd by an intestine Motion of long Duration; for the Fermentation breaks the Edges of the Acid, and converts the Acid into an Alkali. Accordingly we see Treacle-Water, which at first is Acid, becomes Sweet after two Years standing; nay, the very Acid Spirits dulcifie of themselves by being long kept: And so of all the rest. But after all, I don't deny that Acids produc'd in the first Passages and communicated to the Blood, may sometimes put it into an irregular Fermentation; tho' at the same Time I must say, these Acids must be over and over Violent; for otherwise their Edges would be so broken by undergoing repeated Fermentations with the Blood, that they would of necessity become *Alcali's*, and so either prove Inoffensive, or by assuming the Nature of a Morbific Alkali disorder the Parts and give rise to Diseases: Which was the Conclusion I offer'd to prove. But of this more at large in a particular Treatise, intituled *Acidum Infons*.



## Of the Worms in Children.

## I.

Let the Diseases of Children be what they will, we ought always to suspect Worms. For they either directly feed the Distemper, or in the Progress of it, the latent Worm-brood is stirred up, and gives plenty of Worms.

Children and Persons of a Phlegmatic Pituitous Constitution (as they call it) are more subject to Worms than Adult and Choleric Persons.

When Children are much given to the wringing of their Belly with their Hands, 'tis a sign of latent Worms; but if they are likewise troubled with Gripes, the sign is much surer.

There's a just occasion to be jealous of Worms when Men are taken desperately ill all on a sudden, without any manifest Cause, and without the Symptoms that accompany other Distempers; when they are seiz'd with Apoplectick Fits, with a Coldness in their Limbs, a very low Pulse (which is almost always a sign of latent Worms as well as sighing) a Speechlessness and sometimes unexpected Madness. In such Cases there's nothing better for adult Persons, than to exhibit out of Hand in Broth twelve Grains of *Mercurius dulcis* and six Grains of *Scammony* sulphurated. For Children the Dose must be lessen'd; or which is yet better, you may give 'em crude Quicksilver to the bigness of a Pea with Broth; for it operates miraculously. *Chesneau.*

In the Diseases of Children we have always an eye to Worms; just as in the Diseases of Women we have still a regard to the Menstrual  
Flux

Flux and Histerick Fits. Generally speaking in some stubborn Diseases, both of Men and Women, and such as observe no peculiar Period, we suspect a venereal Contagion, which now adays is either Hereditary, or deriv'd from the Nurse's Milk, or being once fasten'd upon the Blood by the Sins of Youth and the course of humane Frailty, is never afterwards extirpated, but starts up of a sudden under the mask of divers Diseases, and creates a great deal of Trouble to the Physician; whom I would advise to be wise and sagacious.

Take of crude Mercury right cleansed, an Ounce, Grass-Water and Purslain-Water of each four Ounces: Macerate for two Hours, stirring often and tightly; then decant and strain the Water, leaving the Mercury in the Vessel. There is not a better Remedy than this against Worms; Witness *Dr. Bates the English Physician*.

To awake all on a sudden with a trembling, especially among Children, is taken by the old Women for a certain sign of Worms. But the same thing happens in Eruptions of the Measles or small Pox, as *Chesneau* teaches us; which I have frequently observ'd in my own Practice.

The Colick in Children springs very often from Worms. *Matthew's Pills*, I mean those which in *England* are call'd *Starkius's*, are very much cryed up for mitigating all sorts of internal Pains; but whether that Vertue extends to the Worm-Colick, I have not yet met with any thing in Books to inform me. But of these more anon, when I come to discourse of the Colick. They are sold at *Rome* by *Mr. Girotti* an Apothecary.



Worms skulk oftentimes in the Cavities of the Gut Colon, which are sometimes very hard to be reach'd by Med'cines; and thence it comes to pass, not unfrequently, that the very best of Remedies fall short of the desir'd success in the Cure of Worms.

Drops of Blood issuing from the Nostrils in continual Fevers, are sometimes a Sign of latent Worms, according to the most Judicious Authors.

If you have but the least suspicion of Worms, I would not have you to delay the exhibiting of proper Remedies, for we have frequent Instances, in which they suddenly carry off not only Children and Infants, but even adult Persons.

In the Year 1694, I joyned with a Friend of mine at *Rome*, in making an Experiment upon Worms, and found that live Worms put in the Spirit of Wine, and in the Water of the Infusion of Worm-seed, dy'd after five Hours: when put into Wine or into the Solution of Aloes, of the extract of Germander, and extract of Tobacco, they dy'd after nine Hours. At nine a Clock in the Morning we put fresh live Worms into the Oil of sweet Almonds, and found them alive the next Day, only they were in a drowsy languishing Condition. Some we put into the Juice of Lemons, and found them not only alive but very well the next Day, as well as those we had put into a Vessel half full of Quick-silver, observing that in this Vessel they avoided the contact of the Mercury, and used their utmost Efforts to get at the Head of the Vessel.

*Of the Small Pox and the Measles.*

## I.

Among Acute Diseases the small Pox make no inconsiderable Figure, and in regard the Mass of Blood is then inflam'd, and as it were set on Fire and blown upon by a Malignant sort of Air, a Physician stands in need of a great deal of Learning, Prudence, and Sagacious Patience in managing the Cure; nay, he is bound religiously to observe the Motions of Nature, or else he will fall into pernicious Mistakes.

Those who purge in the beginning of the Small Pox, or exhibit violent Diaphoreticks, do frequently add fuel to the Fever, and excite internal Inflammations, Delirium's, inflammatory Disorders of the Lungs, most violent Coughs, and a great many such like Symptoms.

The eruption of the small Pox is the Work of Nature; for which reason Nature ought to be obey'd, and its Motions humour'd and back'd by seasonable Remedies. In earnest, in the Cure of Diseases, especially such as we call Acute, a great Part of Wisdom lies in keeping our Minds untainted with the prejudices of Sciences, and our Theory clear of the Errors of the Schools, as well as unbiass'd by Humour and Inclination; and in taking care not to thwart the Motions of Nature by unseasonable Remedies.

If the Blood boils too high, if it flies up to the Head with a rapid Current, if Inflammations of the *Viscera* and Delirium's are at Hand, in such Cases I instantly let Blood, and that in a Quantity answerable to the Urgency of the occasion. In the mean time, I prescribe the

Gelly



Gelly of Hart's-horn, the Emulsions of the Seeds with Water of Violets, the Oil of sweet Almonds with Broth qualified with the cold Seeds; by which means I partly check the impetuous Force of the Blood, and keep it from ranging beyond the Bounds of its Channel. This Method I continue to the fourth Day, at which time, if the Small Pox begin to appear, I assist and second the Motion of Nature with gentle Diaphoreticks, such as the Gelly of Hart's-horn, &c. and carefully observing Nature's Progress, I give a various turn to my Med'cines, pursuant to the various impetuosity or mildness of the Humours.

About the fourth Day, if the imminent Eruption affects the Head with great Heat, Anxiety, startings of the Tendons, &c. I immediately order scarified Cupping Glasses to be applied to the shoulder Blades, whereupon, there follows a present Revulsion of the raging Blood, the abovemention'd Symptoms are stilled in the Bud, and soon after the Small Pox come happily out.

If the Blood drawn from the Veins, shows upon its Surface a white large and gross Crust, such as we meet with in all Inflammatory Disorders, it speaks that the Small Pox will be numerous and very dangerous. This I have seen frequently, and have heard it inculcated by the learned Physicians that attend the Hospitals in *Italy*; and I recommend this and the abovementioned Hints to the Reader, as being the product not of pleasant Speculation, but of patient and stern Observation.

If the Blood flies impetuously up to the Head, and if the *Hipocondria* be distended, I order Sponges soaked in warm emollient Decoctions to be applied to the Palms of the Hands and Soles

Soles of the Feet, and by that means the Symptoms are much abated.

The Diaphoreticks prescrib'd after the fourth Day, must be more or less Active, in proportion to the greater or lesser Accension of the Blood, the Degrees of its force upon the Head, Lungs, and other *Viscera*, and the Urgency of other Symptoms.

A slow lingring Fever, without shivering or cold Fits, a heavy dulness under Sleep, a pain in the Head and Back, sometimes a Hoarseness, sometimes a Bleeding at the Nose, are Signs of the approaching Small Pox : Witness *Dodonaus in Praxi. Cap. 20. Lib. 2.*

In the Diseases of Children, we ought always to be jealous of two Things, namely, Worms and the Small Pox ; and we ought never to be positive of the Nature of their Fevers, till after two or three Days, that we may be sure as to the Small Pox, &c.

When the Small Pox are a coming, I have observ'd the Fever that ushers them in exasperated with violent pains in the Back. Convulsive Motions in the Fevers of Children, that have not had the Small Pox, foretel that the Small Pox will appear next Day : Witness Doctor *Sydenham's* infallible Experiment.

We conclude therefore, that a very acute Pain in the Back, some convulsive Motions, a Cough, watry Eyes, &c. Foretel that the Fever will be of that Sort which retains to the Small Pox.

An unskillful Management of the Small Pox, produces inflammatory Disorders of the Breast, and sometimes a sudden Suffocation.

Those who Spit much in the Small Pox, seldom dye of them ; nay, I never saw them carry off one, that had the Benefit of Spitting. *Valschmid.* If



If an Infant is seiz'd on a sudden with Epileptic Fits, it speaks either Teething or the Small Pox; and if the Small Pox appear after the Fit, they are always of the milder sort, and seldom run together.

Take of the Oil of sweet Almonds, two Ounces; *Sperma Ceti*, three Drams; distill'd Oil of Rhodium, four Drops: Mix, and make an Ointment according to Art: This is an admirable Remedy for defacing the Pits of the Small Pox; it mitigates the Pain, takes off the Acrimony, &c. As the Learned Doctor *Bates* has well observed.

If Adult Persons are not well taken care of in the Small Pox, they oftentimes dye Frenetic; So that in such an Age, the excessive Heat ought to be discreetly check'd, to prevent its violent fluence upon the Head.

### *Of the Colick.*

#### I.

A bilious Colick is frequently attended with Absence of Speech and a Hoarse Voice, which last during the whole Course of the Distemper. This Hoarseness uses likewise to appear in bilious Fevers, so that we may justly reckon it a Diagnostick of such Diseases as spring from the Bile, or from the Salino sulphureous and adust Particles of the Blood.

In a stubborn Colick. if there comes a Copious and Universal Sweat, with an extream Weakness, you may Prophecy the speedy arrival of a Pallie.

If an unequal Distention, and Constipation of the Belly, and a stiff Contraction of the Muscles,  
accom-

accompany a Colick ; 'tis a Sign the Nerves are affected rather than the Intestines.

The readiest consequence of a Colick is a Palsy ; and therefore you must be very cautious in exhibiting large Quantities of Opiats ; for they use to be followed by plentiful Sweats, and then a Palsy.

Chamomile is the true Antidote of a Colick, from any Cause whatsoever ; especially, if it comes after a Sudorifick of Harts-horn Philosophically prepar'd, Diaphoretick Antimony, and the Powder of Unicorn's Horn.

When you use Opium in a Colick, be sure you always add Castor ; for it corrects the Narcotick Vertue of the Opium, and allays the Pains.

I have frequently tryed the good Success of the following Pills in a Colick, proceeding from the Viscidity, grossness and preternatural Acidity of the Aliment or Humors in the first Passages. Take Powder of Rue, and Sal Gem, of each equal Quantities, skim'd Hony a sufficient Quantity to make a Mass.

I must likewise recommend to you the following Powder for an *Arcanum* ; Take of the Powder of the Leaves of a wild Fig-tree that grows upon the Ground, and not upon a Wall, half a Dram ; Elm-leaves pulveriz'd a Scruple. Mix and Exhibit in Broth. 'Twill lay the Pain immediately. This very Powder taken in White-Wine is a Specifick in Nephritick Pains, only the Quantity of the Elm-leaves ought then to exceed that of the Fig-leaves, whereas in a Colick the Quantity of the Fig-leaves is largest.

In a stubborn convulsive Colick, and spasmodick Pains of the Belly arising from a sharp gnawing Matter, especially if accompanied with Thirst, driness of the Tongue, and an universal



sal Heat, I never met with a more Sovereign Remedy, when all others fail'd me, than Bleeding in the Arm, and a diluting Anodyne alter'd chiefly with Chamomile. After Venæsection, I have seen the pains presently stifled and Glysters immediately thrown out that were kept up before by the spasmodic Contraction of the Fibres of the Intestines. To this purpose is the Observation of *Spigelius*, who in dissecting the Corps of such as dyed of *Semitertian* Fevers, and had been tortur'd with a dismal Pain in the Belly, as if it had been a Colick, found the Intestines inflam'd and overrun with a *St. Anthony's Fire*: in which Case, to omit Bleeding and substitute Purgation in its room, as 'tis commonly done, is a very pernicious Practice.

The Colick Pain abates a'most always in a Bath, and therefore you ought to have recourse to a Bath, when the Pain is obstinate.

The Belly-aches occasioned by walking barefooted upon the cold Floor, are quickly cur'd, by applying hot Bricks to the Soles of the Feet; for the Pain in the Belly decreases as the Heat of the Feet increases.

I have observed an odd sort of a secret and unexplicable Sympathy between the Diseases of the Belly and those of the Skin. I have seen Colick Pains turn to Arthritick; and Arthritick Pains, on the other hand, taken off by the accession of a Colick or a Looseness. To this purpose we find *Hippocrates* said; *A loose Belly makes a thick Skin, and a thin Skin makes a constipated Belly.* And accordingly we experience in our Practice, that stubborn Loosenesses are readily cur'd by Diaphoreticks, when other Med'cines prove ineffectual.

If the Excrements are not retain'd, if the Pain shifts and intermits, the Patient will quickly be well.

A Colick turns sometimes to an Imposthume, and sometimes to a Dropsie.

If the Pain relents upon the Expulsion of the Excrements or of Wind 'tis a good Sign, notwithstanding it returns again. In a Colick accompany'd with a Vomiting, cold Sweats, &c. when every thing else fails, the Tincture of Amber, both cures the Present and prevents the imminent Fit.

Before you exhibit Opiats, be sure you always inject a Glyster. Diaphoreticks joyn'd to Opiats are happy Anticolick Med'cines. But you'll do your Patient no kindness, unless you carefully distinguish between a *Humoral* and a *Convulsive* Colick. All cold things are unfriendly to the Breast and the Intestines; be sure therefore that you avoid 'em in the Case of a Colick.

An habitual and endemial Colick arising chiefly from the Acid of Wine, is cur'd by Sudorificks alone, provided an Anodyne Remedy be interlac'd in the Evening. In such cases, I commonly make use of a Pill made of *Diascordium* and *Confectio Alchermes*, or *Hyacinthina*, &c.

*Matthew's* (*alias Starkius's*) Pills are incredibly Beneficial in all Pains whether Internal or External. In venereal Pains I use to mix with 'em Gum, Guaiacum and *Mercurius Dulcis*, and prescribe our Antivenereal Decoction to be drunk above it. The Composition of these Pills is to be met with in the Dispensatory of Doctor *Bates* an *English* Physician.

Sometimes Purgatives are of good Use in a Colick, especially if 'tis not attended with a



Vomiting and a Fever ; and if they are given in a liquid Form. In my own Practice I commonly prescribe a Dram of the Powder of *Cornachini*, ordering to be drunk above it Broth qualify'd with Chamomile Flowers.

When the Colick Pain is fix'd to one Place, and accompany'd with a Fever, it uses to terminate in an Imposthume ; but if the Pain shifts, we meet with no such Thing.

### *Of a Frenzy.*

#### S E C T. I.

In the Climate of *Rome* I have observ'd, that Blistering Plaisters apply'd to Frenetic Persons, kill'd more than they cur'd, or at least did more harm than good : But in a Case of this Importance we ought not to pass a rash Censure.

In the same Climate I've observ'd, That Blistering Plaisters apply'd to delirious Women were more beneficial to them than to Men ; and that several Women in that Condition got happily through.

If a Delirium is threaten'd or appears already, instead of Blistering I use to open a Vein in the Foot, or else the Salvatella in the Hand, and then prescribe diluting Med'cines of the cold Seeds, Melons, &c. By which means I've seen the Delirium quickly check'd.

— In acute Disorders a black Tongue is a'most always followed by a Delirium.

When the Patient is Delirious with an acute Fever, a parch'd Tongue, and the Signs of a great Inflammation upon the *Viscera*, if you then apply Blistering Plaisters, all goes wrong and generally he dies in Convulsions ; whereas if

if you breath a Vein in the Forehead or Arms, and then allow a liberal and continued use of diluting Med'cines, you'll easily compass the Cure. But of this more at large in our Treatise *de usu & abusu Viscantium*.

If a Loosness insues upon a Delirium, especially when the Disease tends toward a Concoction, it gives a happy Solution; and I have oftentimes observ'd, that delirious, restless and anxious Patients, have been much better, in a Days time, after the accession of a Looseness. Going upon this repeated Observation that a Loosness takes off a Delirium. I trace Nature's Steps, and have try'd oftner than once, the good Service of the Powder of Cornachini, ordering to be drunk above it large Quantities of diluting Med'cines, of the Decoction of Barley, Filings of Harts-horn, Sal-prunel and other dulcifying Ingredients; especially if there be a great heat upon the *Viscera*, and ground to suspect an Inflammation.

If a Frenzy turns to a Lethargy, 'tis an ugly sign; but if a Lethargy turns to a Frenzy it promises well.

Ardent Fevers are always attended with high-colour'd Urine; and therefore if in such Cases the Urine becomes whiter and thinner, and be accompany'd with Watchings, Perturbations of the Eyes, a Stammering Tongue, &c. you may safely prognosticate a speedy Delirium.

A thick gross and muddy Urine in acute Diseases, is follow'd for the most part by Disorders of the Head; so that when such Signs appear, if the Patient inclines to Sleep, and has a low Pulse, with such like Signs of Coagulation, you may infallibly assure the By-standers, that a Lethargy is not far off. But if this sort of Urine



is attended with Watchings, Head-aches, a dryness of the Tongue, and a burning heat upon the *Viscera*, a Delirium will speedily visit you, as I have frequently observed in the Hospitals up and down *Italy*.

According to *Valschmidi*, the gentler sort of Acids, and the Cinnabarine Powders with Emulsions, are the chief internal Remedies in a Frenzy.

Many Mad People have been cur'd by being duck'd in Water, after the same Method with those bit by a Mad Dog, whose only Cure consists in a repeated immersion in Water. This Method of Curing Mad People, has been try'd in *England* with great Success, by Mr. *Robertson*; as *Mercurius*, the Son of *Helmont*, informs us in his Treatise *De Homine*, § 29.

### Of an Asthma.

#### I.

Unless you rightly distinguish between a Convulsive and a Humoral Asthma, you'll never make a happy Cure.

If your Patient is troubl'd with a difficulty of Breathing, open a Vein in the Arm, notwithstanding the presence of a Dropsie. *Hipp. Epidem.*

If in the Night-time, especially after three or four hours Sleep, the Patient awakes of a sudden, with a violent Asthma and Suffocation Fits upon him, and presently runs to the Windows in quest of the free Air; you may rest assur'd that he has a Dropsy in his Breast especially if his Hands or Feet begin to swell; and the Face loses its wonted Colour; and a-

bove

bove all, if he observes a heavy Numness, or a beginning Palsy in his Arm. We meet just with such a Numness in the Arm, in the other Diseases of the Lungs, particularly a Peripneumonia. If a Pleurisy or Peripneumonia invades Asthmatick Persons, they generally die of it.

A Dysury or difficulty of Urine coming upon an Asthmatick Person is a good Sign, and upon the sudden cessation of the Dysuria the Asthma returns. In confirmation of this, I have made the Observation several times, that in the Diseases of the Breast we ought always to push toward the Urinary Passages, Nature having shewn us the way; and that there is a great Sympathy between the Legs and the Breast, as well as the Privities and the Breast; the Diseases of which Parts undergo a mutual Commutation.

The Diureticks prepared from lixivious and acid Salts, are not so very safe in the Diseases of the Breast; for they raise the Cough and exasperate the Illness. But, on the other hand, the Powder of Hoglice, the Preparations of Turpentine, the Balsom of *Peru*, the Decoctions of the opening Roots, *Fernelius's* Syrup of Marsh-mallows, &c. promote Urine very powerfully; and, at the same time, are not offensive to the tender little Membranes of the Lungs.

Imposthumes happening in the Legs of Asthmatick Persons, may chance to take off an Asthma. *Rhasis.*

Asthmatick Fits return more frequently in a cold and moist Air, especially after hard Drinking.

An Asthma may either proceed from one's Parents, or from an intemperate way of Living.

An Asthma sticks by old Persons till they die; and sometimes the same is the Case of other Folks.



Fat and idle Persons are most liable to an Asthma.

Sometimes an Asthma turns to an Inflammation of the Lungs; and upon that score you ought to be cautious of too volatile Remedies; for these may readily produce an Inflammation in the thin and tender Membranes of the Lungs, continually fill'd with a great stream of Blood.

A violent Asthma sometimes reduces the Patient to the last extremity; in which case, Death is prevented by a speedy Venesection; and that repeated, if Necessity requires, or performed in both Arms at once. *Sperma Ceti* from a Scruple to a Dram dissolv'd in very hot Broth, is likewise very serviceable in procuring a freer Respiration; but in a particular manner 'tis of wonderful use in that sort of Asthma which is call'd Puitous and Humoral.

If an Asthma of Repletion, or that of a Catarrh that's speedily dissolv'd, is attended with a moist Cough, and if this Cough ceases and the Excretion lessens, while the difficulty of Breathing remains, Death is at hand. *Valescus de Farranta, &c.*

### Of a Diarrhœa and a Dysentery.

#### I.

Loosnesses arise frequently from Grief and the Passions of the Mind; and are in a manner incurable, if the Cause of the Grief remains. This sort of Loosnesses uses to be followed by an erratick Fever, till the Patient wastes and pines away to Death.

Sweating coming upon a Loosness stops it.

Loos-

Loosnesses are pernicious in the Diseases of the Breast; they are likewise very offensive to Women in Childbed, and Children seiz'd with Malignant Fevers.

You must not begin the Cure of a Loosness with Astringent Med'cines, for by that means you will occasion stubborn Obstructions of the Viscera and Intestines, which at last are succeeded by an obstinate Dropsy.

The eating of Meat inflames a Loosness, so that you must avoid it as much as you can.

Nothing renders the Belly more costive than the Use of Venery; witness, *Hipp. 7. Epidem. Aetius, lib. 3. cap. 8. Paulus, lib. 1. cap. 13.* who all assert that the exercise of Venery dries the Belly. The same is observ'd by *Amatus Lusitanus, Cen. 11. Obser. 47.*

Those who are much taken up in Study or Domestick Cares, are costive. Costiveness is one of the Endemial Distempers of the *Roman* Climate.

Some People have been cur'd of Loosnesses, and fainting Disorders of the Stomach, accompanied with a Dysentery, by chewing Cinnamon all day long, and swallowing the Spittle of that Mastication.

Sometimes a Purgative Med'cine raises a dangerous Superpurgation, which frequently occasions sudden Swoonings; and in this case a Scruple or half a Dram of Venice Treacle speedily puts a Stop to the Evacuation; which I have sometimes wonder'd to see in the Hospital upon the Prescription of an old Physician.

The Smoak of Turpentine thrown upon burning Coals, and received by the Fundament, cures an inveterate Loosness, a Dysentery, a Tenel-mus, a Relaxation of the Anus, &c.



If Persons ill of a Loofness void a Saffron-colour'd Bile, not unlike the Rust of Iron dissolv'd, or red Bricks, it speaks a Pestilential Humour, which will carry off the Patient, pursuant to the constant Observations I have made upon such Instances. *Chesnau l. 3. c. 6.*

If a Loofness insues upon Anger, 'tis a good Sign, but if the Loofness does not appear you may expect a Fever.

I have frequently observ'd, and indeed I've heard it confirm'd by others, that in some Distempers, especially those of a Chronical Form, such as the Phthisick, &c. and even in other Distempers, the sick Persons are taken, a little Time before their Death, with a Motion to go Stool, and many of 'em die in the very Time of the Evacuation. This deserves to be maturely weighed.

A bilious Vomiting is unlucky in the beginning of a Dysentery. *Hipp. Coac. Pran. Sect. 3. Num. 62.*

Most of those who die of Dysenteries are kill'd by a Sphacelus of the Intestines, which appears at least three Days before their Death; for then the extreme Parts begin to grow cold, their Pulse is low and unequal, their Sense of Thirst and their Pain is not so violent, and some of 'em turn delirious some Hours before they die.

If a Dysentery without a Fever does not yield to other Remedies, we must have Recourse to the Tettuccian Waters, which if given according to Art, will infallibly compass the Cure. Of this I have seen two or three Instances to my great Admiration.

If the Use of astringent Med'cines is followed by an Inflammation of the Belly, and a greater Difficulty in Stooling, Rhubarb ought to be frequently

quently us'd, interlacing now and then some Anodyn Mixture made of the Syrup of Corn Poppies, Water of Violets, *Requies Nicolai*, &c. By these means you'll make a Cure.

In the Cure of a Dysentery be cautious of using too great a Medley of Remedies; your Medicines ought to be few and simple. I have often cur'd Dysenteries with nothing else but Whey given inwardly, and injected by way of Glyster: Nay, several Authors take this for a great Antidysenterick *Arcanum*. Sometimes the Disease is inflamed by an over copious Injection of Glysters, by reason that they occasion a greater Tumult in the ulcerated Fibres of the Intestines. They ought therefore to be given but seldom, and that in a small Quantity.

If a Dysenterick Person be taken with a Vomiting, 'tis a dangerous Case.

The Hiccup is a mortal Symptom, and so is the Jaundice. A Difficulty of swallowing is the Forerunner of Death.

In a mortal Dysentery the Stomach is affected as well as the Intestines, and that is the Source of so many Evils.

The Pills call'd *De Caccionde* the Basis of which is Cashue, are an admirable Anti-Dysenterick, only they must not be given in the beginning.

If a Dysenterick Person is seiz'd with an Inflammation of the Tongue, and a Difficulty of Swallowing, there's no Hopes left.

If the Pain is not immediately followed by Excretion, you may conclude from thence, that the small Intestines are affected.

A Dysentery differs from the running Piles in this, that the Hemorrhoidal Blood comes before the Excrements, whereas the Dysenterick Blood either accompanies or comes after the Excrements.

If



If the Gut call'd *Jejunum* be affected, it prognosticates Death, by reason of the Vicinity of the Liver.

If a Dysenterick Person takes Opiats, and the Day after appears with another Colour in his Eyes, he'll scarce get over it ; but if the Colour of his Eyes continues unaltered, 'tis a Sign he may recover. *Valschmid.*

You must not exhibit Astringents in the beginning ; and *Crato's* Rule, is, not before the seventh Day.

Among the Anti-Dysenterick Med'cines we cannot but recommend toasted Rhubarb, Flowers of red Roses, and Nutmegs.

The Root of *Hypecacuanha* is a Specifick, and a Remedy almost infallible in the Dysenterick Fluxes, and other Hemorrhagies, Colliquations of the Humours, &c. Of this I was inform'd by the Learned Doctor *Sherard*, a noted Botanist and an excellent Physician in *England*, when he travel'd from *Rome* to *Germany* with my Lord *Townsend*. And not long ago I had the same thing confirm'd by Letters from the Excellent *Jo. Jac. Mangetus*, a celebrated Practitioner in *Switzer-Land*. But a full Description of this Root, may be met with in *Piso's* Treatise *de Plantis America*.

### Of an Apoplexy.

#### I.

There's a Necessity of distinguishing an Apoplexy, into the Sanguine and the Pituitous kinds. In the former Bleeding is of admirable Use, for by that means I have seen the Apoplectick Persons recover immediately. In the Pituitous Apoplexies, an emetick or a violent Purge prescrib'd out of hand

hand is the only Remedy; upon which Head I prefer the Powder of *Cornachini* and the Infusion of *Crocus Metallorum* in Wine. Some Apoplectick Persons of the pituitous Class, have been entirely cur'd by taking a Vomit of this Infusion every Month.

In an Apoplexy the Illness runs higher or lower, in proportion to the greater or lesser Difficulty of Respiration. If a Person once seiz'd with an Apoplexy is afterwards seiz'd with a Vertigo, he may expect to have his Fits again.

If after Bleeding the Respiration becomes freer and the Pulse in good Order, it prognosticates a Recovery.

If a Glyster is thrown out an Hour after 'tis given, it is a good Sign, but if it does not come away there's Danger in the Case; for it speaks, that the Intercourse of the Spirits from the Brain to the intestinal Fibres is almost interrupted.

Glysters for Apoplectick Persons are to be given in a very small Quantity, to the end they may be retained and lodged longer in the Intestines; for if the Quantity be too large, they run out again: Indeed, if they are not retained when injected in a small Quantity, 'tis an ugly Sign, for it speaks the total Resolution of the Parts, and consequently the Approach of Death.

A Fever seldom follows an Apoplexy, especially if it be of the Pituitous Sort.

If a *Catochus* happens in the very Paroxysm of an intermitting or remitting Fever, no Remedies ought to be prescribed during the Fit; for here's nothing you can give, but what will injure the Patient, unless you make use of Fictions and Revulsions which I own to be allowable. Sometimes the *Catochus* disappears along with the Fit; but if it does not, you must let Blood immediately,



ately, or purge according as the Indications are; but if it comes a second time it brings Death along with it; Witness, the learned *Dodonaus* in his *Observ.*

*Valesius* has observed of Lethargick People, that the Pulse which was formerly low and little, becomes large upon the Accession of the Lethargy; and the larger the Pulse grows the sooner the Patient dies. In like manner *Rhodius* on *Septalius*, tells us out of *Ballonius*, that in all sleepy Disorders, especially a Lethargy and Apoplexy, Death approaches, when the Pulse turns from little to great, and increases sensibly in Magnitude. And I observed the same thing at *Rome*, 1695, in the Case of an Old Woman, who after she had been Apoplectick for four Days, had a large and brandishing Pulse about ten a Clock at Night, and died about four the next Morning. This Observation I seriously recommend to those who practice Physick.

In 1694 in the Winter time, I observ'd in the Hospital at *Rome*, that when the Apoplexies were severe and already confirm'd, Blistering Plasters did no Service; nay, all the Patients in that Condition died.

Foaming at Mouth prognosticates Death in an Apoplexy, *Hip.* 2. *Aph.* 43. *Tulp.* 1. *Obs. med.* 6. and *Forestus* 10. *Obs.* 74. in *Schol.* says, an Apoplexy is always a mortal Illness, but 'tis more such, if there appears Froth about the Mouth: And *Rhases* speaking of a violent Fever, says, 'Tis in vain to offer any Cure after they begin to foam at the Mouth.

Apoplectick Persons seldom get clear without the Resolution of some Part; and if all their Members are seiz'd in that Paralytick way they're soon carried off; nay, some fall into their Apoplexy again.

Those

Those who are subject to an Apoplexy or a General Palsie, or are already seiz'd with either, are mightily troubled with Wind, Inflations in the Belly, and a rumbling Noise in the Intestines. Now, these Symptoms proceed from the Interruption of the Influx of the Spirits thro' the Nerves to the Intestines and adjacent Parts: For the fleshy Fibres of these Parts being thereby render'd Paralytick, and their tonick Motion almost sunk, the Vapours and Steams that exhale from the Contents of the Intestines assisted by the intermix'd Particles of the Air, heave up the abovementioned Parts into a flatulent Bulk, much after the same manner with a Dog's Ventricle, which swells presently upon the Ligature of the six pair of Nerves. The Reason of this Phenomenon is accounted for at large in our Treatise *De fibra motrice & morbosa*.

*Of Pain in general, of Convulsions and Convulsive Motions.*

Such Pains as do not yield to Med'cines, Bleeding, or other means, turn to a Suppuration. *Hipp.*

If a Shivering comes after a fix'd Pain with a Swelling and great Heat in the Hypochondria, Breast, Spinal Marrow, or elsewhere, 'tis a Sign of an Inflammation, and that the Humour tends to Suppuration. *Jacob. Comment. ad lib. 4. Coac. Hip.*

If the Pain is fix'd in one Place, and does not disappear upon the use of proper Remedies, let the Part be where it will, burn it with crude Flax. *Hip. de affect. 5. speaking of the Sciatica.*

Such Pains as grow easy without manifest Signs are mortal. *Hip. in Coac.*

The jovial Bezoardick is an admirable Remedy for allaying the raging Pains of the Parts, and  
throwing



throwing out the peccant Matter by insensible Transpiration; but in the mean time you must take care, that these Pains are not gouty, venereal, or the like, the matter of which being retained might do more Mischief; you must likewise take care not to use this Medicine in the Diseases of the Head and Nerves, for Tin is naturally an Enemy to the Nerves. However I have been oftentimes surpriz'd to find, that this Bezoardick is an infallible Cure in Hysterick Cases.

If Pains in any Part of the Body are periodically exasperated, and return at a set Hour, the peccant Matter is not bred in the Place affected, but is deriv'd from some other Part: In such Cases a gentle purging Potion, exhibited three Hours before the time of the Invasion, is an effectual Remedy, especially if the Scene be laid in the Abdomen.

In Pains of the external Parts, when all other things prove ineffectual, you must have recourse to a Caustick. In this Case I use to apply the Leaves of Crow-Foot, or a Mixture of quick Lime and liquid Soap. This Medicine is exream serviceable in the Sciatica, and other Pains: Witness, *Hip. Lib. De Intern. affect. §. 19*, and *Lib. De affect. §. 30*. If the Pain is gathered up in one Spot, burn it; nay, let the Pain be where it will, unless it be in the Spleen, you will still find Benefit by burning.

'Tis manifest from repeated Experience, that the Pains of the Head arising from the Disorder of the Stomach, do chiefly affect the Forehead; and on the other hand, that Head Aches springing from the Disorders of the Woomb, fall chiefly upon the Crown and hinder Part of the Head. Accordingly we find, Women who are subject to Hysterick Fits, use to have a Sense of Cold in the Crown of their Heads; and this I take to be

be the chief Diagnostick of an Hysterick Case.

If a Place be affected with Pain, and the Flesh of the Part be at the same time Flaggry or wasted, burning is extreme seasonable. *Hipp. de Artic.* §. 54.

I have remark'd three or four times that the most obstinate Head-aches, which were even next door to Madness, have been happily cur'd, when all other things prov'd ineffectual, by nothing else but the Powder *de Gutteta*, given to a Dram, with Thea, or with Broth impregnated with Cowslip Flowers, Betony, &c. Of this Powder see *Riverius Cap. de Epileps.*

There's nothing better against Head-aches or a heavy Dulness in the Head, than bathing ones Feet in warm Water, when they go to Bed.

I saw very lately a Man of fourty Years of Age, cur'd of a very dangerous Head-ache, after trying all Remedies in vain, by the Juice of Beet Roots, strongly snuffed up the Nostrils several times a Day.

The Spirit of Salarmoniack mixt with the stale Oil of sweet Almonds gives speedy and effectual Relief in external Pains, and Experience has taught me, that spirituous Ingredients blended with those of an unctuous Character are admirable Remedies against Pains, and infinitely preferable to the Spirituous taken a Part.

When the Small Pox are just ready to break out, their Approach is signified by convulsive Motions; nay, if you find a Child seiz'd with a Fever that has not had the Small Pox before, and observe convulsive Motions upon him, with a burning Heat about his Loins, you may safely prophecy, as I have done several Times, that the Small Pox will appear the next Day.

According to the History of Diseases, some Children have the Measles twice or thrice; and  
in-



indeed I once met with an Instance of that Nature at *Padua*.

Those who are troubled with the Cramp, void for the most Part great Plenty of thin and clear Urine.

The Powder *de Gutteta* is a Specifick in Convulsive Disorders, as well as in the Megrim, Head-aches, Heaviness of the Head, &c.

The Balsam of *Paracelsus* is a most potent Remedy for all Convulsions happening after Wounds, Punctures of the Nerves, &c. and indeed no Surgeon ought to be without it. See the Description of it in *Paracelsus* his little Surgery.

Generally speaking, the Convulsions of Infants spring from the Stomach, and thence it comes to pass that gentle Purgatives, particularly the Infusion of Rhubarb, give immediate Relief.

In convulsive Distempers, thick and muddy Urine looks well; but thin and white Urine speaks no good.

There are three Med'cines, that have a just Title to Preference before any other in Epileptick and Convulsive Diseases; namely, native Cinabar, Oak-fern, and Elk's-hoof.

Your Children that have a scabby Crust upon their Head, are seldom troubled with the Epileptick Fits.

Women taken with Convulsions after Miscarriage, find it a hard Matter to get thorough, pursuant to my own Observation. Convulsions following a Frenzy are Mortal, according to *Aetius*.

In the Disorders of the Nerves and the Head, the Powder of Cornachini takes Place of all other Purgatives.

In Convulsive and Nervous Diseases Violets are a Specifick.

The Spirit of Sal-armoniack, curdles the Milk in the Stomach of Children; and for this Reason, you must keep off from that Med'cine, when you have to do with Epileptick Children.

You'll find it worth your while, when a Child is taken with Convulsive Fits, to mind whether the Mother has her Terms upon her or not.

## Of a Cough.

### I.

Coughs of long standing disappear upon the Swelling of the Testicles, and a Tumor in the Testicles goes off with a Cough: *Hipp. 2. Epidem. Sect. 1.* This Remark furnishes us with a growing Confirmation of the tacit Consent, I have so often mentioned, between the Privities and the Breast, as well as between the Legs and the Breast.

In Children a Cough springs a'most always from a Stomach stuff'd with Crudities; In which case we ought always to have a regard to the Stomach; but so as not to neglect the Pectoral Remedies.

A violent Cough uses to produce a Rupture in Children, Miscarriage in Women, and a Consumption in Men; for which Reason it ought never to be slighted.

Milk is an admirable Remedy in a dry Cough, arising from the Acrimony and Thinness of the Humours. In this case I use to prescribe Milk boil'd with the Broth of Meat or Violet Water.

If an obstinate Cough, attended with a Fever, is proof against all Remedies, it tends to a Consumption, even when there's no Spitting of Blood in the Case. When the Cough retains to other Distempers, you cannot compass the Cure, without curing the Diseases 'tis tack'd to.



If a Cough happens in a Fever, the Fever will not be perfectly cur'd, while the Cough lasts.

Dry Coughs and a Roughness in the Throat, are occasion'd by a Northerly Wind. *Hipp. Aph. 5. Sect. 3.*

I have sometimes observ'd that a violent Cough seated in the Lungs, and communicated to the Head, will occasion a surprizing Loss of Memory and Reason, as well as a Palsy in the Hands, and other Members. *Boyle de Util. Philos. Nat.*

If dropfical Persons are seiz'd with a Cough, it portends a fatal End. *Aph. 35. Sect. 6.*

I've found by Experience, that in a dry Cough when all other Remedies are fruitless, there's a great deal of Benefit reap'd from Crab's Eyes exhibited to half a Dram in the Decoction of Purslain, Coltsfoot, and Violet Leaves.

In a pectoral Cough, your common Remedies prepared from the pectoral Herbs are much more serviceable, than the long-winded Compositions of the Shops. Repeated Experience justifies this Truth.

Physicians get no Credit by administering Purgatives in a Cough, especially that of the pectoral Form; nay, if the Cough is occasion'd by unseasonable Weather, they do more harm than good.

Pectoral Coughs are wont to be exasperated by Purgatives, witness *Etmullerus*; but a Purge may be granted in such Coughs as have their Source in the Stomach, and are accompanied with a notable Cacochymical Disposition in the Blood.

Bolus's made of fresh Butter with Sugar, and exhibited at Night, pacify the most violent Catarrhous Coughs.

*Lobelius's* Syrup of Hedge-Mustard is likewise very serviceable in a Cough and a Hoarseness.

We learn from *Dr. Willis's* Authority confirm'd by repeated Experience, that the best Remedy against the Convulsive Cough of Children, is a Decoction made of the Fern of Trees, especially that of the Oak, which is likewise beneficial in other Convulsive Disorders.

The Spirit of Harts-horn is of admirable Use in the most violent Coughs.

*Of the Stone and the Gout.*

I.

The Stone and the Gout murder the Rich more than the Poor; and the Wise more than the Foolish.

The primitive Parents of the Stone and the Gout, are, Wine, Venery, Sloth and Intemperance.

Their Antidotes are, the drinking of Water, the use of Milk, Sobriety and Exercise. Accordingly we see that *Zechius* made a mighty Secret in his Consultations, of a Pint of warm Water taken down immediately before Dinner: Nay *Piso* and *Alexander* recommended the same Remedy many Years before *Zechius*, affirming that after the voiding of the first Stone, they never saw any more bred in those who continued the Use of warm Water, for a considerable Space of Time.

'Tis almost in vain to prescribe any Remedy to the Gouty, unless they be very temperate in the use of Wine and Venery, and avoid both Idleness and hard Drinking.

You may distinguish Rheumatick Pains in the Loins, from those of the Nephritick Form, by the following Sign which never fails. When the Patient raises and extends his Body after bowing to the Ground, if the erecting is perform'd with



Difficulty and Uneasiness, and a Sense of being, as it were, cut thro' the middle, you may rest satisfied that 'tis no Nephritick Pain, but a Rheumatick Illness occasion'd by sharp and briny Salts conveyed to the Part in a ferous Humour.

In these Rheumatick Pains of the Loins, I have met with great Success in administering every Morning about a Pint of Milk Thea : And perhaps the same Remedy would not be amiss in the Case of the Gout or the Stone.

If the abovemention'd Signs attend Nephritick Cases, and be accompany'd with Pains upon the external Muscles of the Back Bone, we then look for external Imposthumes ; but if the Pain rages more inwardly, it prognosticates in like manner inward Imposthumes. *Hipp. Sec. 7. Aphor. 36.*

Eating Musk Melons, and drinking the Water distill'd from their Pulp, either cures, or considerably benefits, in the Gout or the Stone, provided the Measures of Discretion be observed in the use of Wine, Venery, and Exercise.

Prepar'd Hog-Lice give present Relief, in a Suppression of Urine, and are of use to break the Stone.

If other Remedies are ineffectual in a fatal Suppression of Urine, let the Patient be well cover'd and supported by two or three by-Standers, in order to fetch several Turns up and down the Room ; For *Sydenham* is evidence that by this means large Quantities of Urine have been procur'd.

The Pains of the Kidneys, proceed chiefly from five Causes ; namely, a Flux or down falling of a sharp and corrosive ferous Humour, an Ulcer, an Inflammation, an Imposthume, and the Stone.

In Nephritick Cases, if the Patient is seiz'd all on a sudden with a Sense of something pricking, and as 'twere stinging him in the Region of the Ureters,

Ureters, 'tis a certain Sign of the Stone just falling on that Part.

After Bathing, and particularly the disappearing of the Pain, if it returns with the same Violence and Vomiting the next Day, sooner or later, you may rest assur'd that the Pain is Nephritick. *Chefnau.*

The Drinking of Mineral Waters expells and prevents the Stone; and if these cannot be conveniently come at, you may supply their room with a Decoction made from a large Quantity of E-ringo Roots, after it is a little bruis'd. If you dilute White-Wine with this Decoction and drink plentifully of it, you'll find it a very powerful Remedy against the Gout and the Stone. Witness *Chefnau.*

A Stone in the Bladder uses to appear like the Pain of the inward Piles, but the Pain of the former is much more violent than the latter.

Sometimes we meet with a Stone in the Bladder without any Suppression of Urine; and for that Reason a Suppression of Urine, cannot be given in for an infallible Sign of a Stone in the Bladder.

That sort of Urine, that has a great deal of Humour or Matter at bottom, is apt to breed the Stone. *Avicenna.*

If the Patient handles his Yard frequently, if he has a Motion to Stool when he begins to piss, if he walks in the Streets open and as it were bandy legg'd; from these three Signs, you may certainly conclude upon a Stone in the Bladder.

Among other Remedies calculated for the Stone and Gout, Thea and Coffee merit the first Rank. In a wandring scorbutick Gout all the Preparations made from the Pine Tree are of use, particularly, Pine Water, the Essence of Pine, the Extract of Pine, and the like. Witness *Valschmid.*



In the very Paroxysms of Nephritick Pains, Lithontriptick and Aperient Med'cines do more harm than good; but on the other hand, we reap Benefit, from the Emollient, Laxative, and Anodyne Remedies, which unbend and mitigate the painful Contraction of the Kidneys and adjacent Parts, for by that means the Stone gets into the Ureters with great Facility.

I met lately with an Instance of an Arthritick Person at *Rome*, who got rid of his Illness upon voiding a large Quantity of thick gross Urine, that turn'd soon after to the Consistence of a Jelly.

Those who vomit frequently, and have the Benefit of an open Belly, are not so liable to the Stone; and accordingly we find the use of Glysters and gentle Purgatives, is very beneficial both in the Stone and the Gout. This I have frequently observ'd, particularly at *Rome* in the Year 1693, in the case of a gouty Person that was seventy Years old. He was raised up by two Servants, and carried in the Morning to a Place of Convenience for going to Stool; but the Evacuation was no sooner over, then he walk'd back without Help, affirming that his Joints were rendred freer and nimbler by going to Stool.

In most cases we find that the Gout lays its first Scene in the great Toe. 'Tis impossible for those, who ply Venery and Wine intemperately to escape one of the two; I mean the Gout or the Stone.

If Gouty Persons are in such a Condition as admits of no other Exercise, it would be proper to exercise their Voice, either in reading aloud, or talking, or singing: For *Plutarch* in his Book *de tuenda valetudine* reckons up constant talking and singing, among the several Kinds of Exercises; upon

upon which Head you may consult our Treatise of the *Tarantula*. Chap. 13.

The chief Sign of a Stone in the Kidneys, is a fixed Pain in that Region, accompanied with a continual Vomiting; all the other Signs are uncertain, and common to the other Pains of the Abdomen.

The most certain Sign of a Stone in the Bladder, is its being touch'd by a Catheter; for there's no other Signs, but what may impose upon the best Physician that is.

For an *Arcanum* against the Stone remember Mr. Boyle's distill'd Water of Arsmart.

Sometimes there is a Stone in the Kidneys without any Pain in that Part. I have seen two Instances of this Nature, one at *Boulogne*, the other at *Padua*: in the dissecting of whose Corps I found large Stones in the Kidneys, notwithstanding they had never been troubled with Pains in that Quarter. *Hollerius* in his *Practice cap. de Hydrop*, makes the same Remark: *In dissecting a humane Body, says he, I found the left Kidney wasted and full of Matter, and the right one fill'd with a Stone, tho' the Person had never complain'd of Pain in those Parts.*

Thus far I have endeavoured to chalk down the History of Diseases in a concise Style, by the way of scatter'd Sentences, recommended and approved by aged Experience: This I've done to point out the Way by which the Practice of Physick may reach the due Pitch of Perfection. For the Purpose: This loose and aphoristical Way of describing Diseases is of infinite Service to Practitioners. In the first place, it presents them with a faithful and clear physical Knowledge, and such as springs from the Bosom of Nature, which may be look'd upon as the first Gloss, or a perpetual



Paraphrase in directing the Cure of Diseases. In a second Place ; in pursuing this Method, we keep clear of the Errors of those, who, following their Scientifick Method in the Definitions of Diseases, &c. do either leave out or wrest a great many of Nature's Precepts that fall not pactly within the Verge of their Method. By this means they perplex the true Sense of Nature, and dropping the Kernel and Marrow of Sciences, amuse themselves with the sorry Remains of dry and empty Compendiums. The third Observation that offers itself upon this Head, is, That these Aphorisms or snug Sentences, being not the wither'd and spurious Trunks, but the genuine and juicy Roots of the History of Diseases, they likewise disclose the true Indications to be minded in the Cure, which a Methodical Disquisition can scarce do ; for there one Part gives Light and Colour to another in a circular Way, and the gratifying of the Understanding is more in View than doing Justice to the Nature of the thing. A fourth Advantage accruing from our sententious Way, is, the paring off a great Part of that Labour and Study, we are wont to employ in polishing and imbellishing Sciences by the severe Laws of Method: I mean, in making the artful Deduction and Connection of Parts, in setting forth the Hypotheses upon which the Matter is rear'd, in amassing great Store of Imbellishments, and such other recommendatory Trappings, as serve more for Ornament than for Use. Such are the severe Bonds of the Schools, which squeeze out the Truth, and wind up meagre and wither'd Trifles. Now, by describing Diseases in scatter'd and straggling Sentences, we avoid both these and many other Inconveniencies. This sort of Sentences may be compar'd to a Looking-Glass of  
Metal,

Metal, which does not reach the due Representation of Images 'till 'tis polish'd to the last Degree ; for in like manner our Aphorisms, having undergone the File of repeated Experience, afford a just Representation of the Method of Cure, pursuant to the genuine Image of Nature. Among those who stand up in Justification of this Truth, we meet with the divine *Hippocrates*, a Man that blended his Learning with Prudence and Discretion, that built much upon Experience and Observation, and courted neither the jargon of Words nor the pageantry of Method, but singled out and disintangled the true Nerves of the Science. My Lord *Bacon* takes the same side of the Cause in his Book of Morals, where we find him speaking to this purpose. “ As in the  
“ way of Life, the Actions of Men lie stragling  
“ without Compactness or Order, so scattered  
“ Hints and Instructions are most serviceable ;  
“ for the methodick Way of treating Sciences,  
“ brings in the Art in an entire and coherent  
“ Body, upon which Men turn so secure, as if  
“ they had already canvast its highest Mysteries.  
So far my Lord. But 'tis needless to insist upon a Subject that lies almost beyond the reach of Dispute.



## C H A P. X.

*Of the various Ages and Progress of Physick.*

## S E C T. I.

**H**AVING thus detected and gone through the chief Hindrances in the way of Practice, we lie under an Obligation of going yet farther. If we bend our Thoughts upon the several Ages of the Practice of Physick, I mean its various Progress, Heighth and Declension, we'll meet with little to brag of; abating for those happy Times of the *Grecians*, in which the Practice of Physick flourish'd, and was almost at its Meridian. For tho' the *Grecians* did but prattle idly in forming Systems of Philosophy, and pin'd all their Judgment of natural things upon noisy Disputes (excepting *Democritus* and his Followers, who tacitly rip'd up Nature without opening the Schools;) yet in fixing and promoting Physick they acted a very wise Part, and truly shewed themselves to be Inventors: So that this is the only Nation upon Earth, that by a certain national Right lays claim to the Glory of the most solid Knowledge of Physick. Of this Truth we have an illustrious Instance in the School of *Coos*, an eternal Monument of which is at this Day known to us under the Title of the Works of *Hippocrates*. *Calius Aurelianus*, *Aretaus*, and the other *Grecians* who liv'd in the succeeding Ages, down to *Galen's* Time, are farther Proof. But in the Time of *Galen*, or at least soon after, the *Roman* Empire being broke in upon by the fatal Power

Power of the barbarous Nations, not only Physick, but even the other glorious Monuments of ancient Arts, were almost bury'd; and their calamous Fall continued unrepaired to the Time of *Charlemaigne*, nay, even to the Tenth Century. Physick having wandered without a Guide or Light in that wide extended Defart of Time, stumbled at last upon the Pipes and Reeds of the *Arabs*, who converted the active and masculine Science of the *Grecians*, into an Exercise of Wit and Fund of Disputes, acting the part of Children, who are apt to prattle, but unqualified to beget. 'Twas chiefly upon these Considerations that the celebrated *Fuchsius* razed their Learning to the Ground, as appears from his Institutions, *Lib. 5. cap. ult.* and *Fernelius* treading in his Footsteps, prefac'd to his King with the following Invective against the *Arabians*, "The  
" *Arabs*, says he, passing into *Italy*, through a  
" Channel of Barbarity and Filth, bred Apothe-  
" caries and Mountebanks rather than true Phy-  
" sicians; and raising all their Conclusions upon  
" naked and empty Words, without the Sinews,  
" without the Laws of Demonstration, have left  
" the World a Legacy of Jargon and Noise, but  
" little or no Instruction. They delivered the  
" Rules of Evacuation in such a cloudy and in-  
" constant Way, and dip'd them so deep in the  
" obscurity of Controversies, that the ablest Phy-  
" sicians are often at a loss to know what sort  
" of Remedy they would be at." So far *Fernelius*.  
And what he has said of the *Arabs*, may be  
applied with equal Justice to the other barbarous  
Schools.



## II.

After the *Arabians* had continued their unjust Monopoly for several Years, Physick thus toss'd and shatter'd with so long a Storm, fled at last to the *Italians*, in hopes of a kinder Harbour. The *Latins* being long unacquainted with Sciences, snatch'd up the first Books that came to Hand; and those were either written, or adulterated and corrupted by the *Arabians*. This *Arabian Contagion* did so unhinge and sink their Minds, that for a long time, they utter'd no Words, and harbour'd no Thoughts, that did not relish of their Learning; nay, the Plague made a speedy March even to foreign Universities, and particularly those of *Spain*; for at that time all the Rays of Sciences sprung only from *Italy*, and Foreigners consulted her as an Oracle. And if we take a narrow View of the Books and Studies of the Physicians that liv'd from the eleventh to the fifteenth Century, we'll find them to be nothing else, but undigested Medleys cull'd out of the *Arabian* and *Grecian* Authors, Commentaries and Glosses in order to unfold their genuine Sence, and at last a Perplexing of Physick, inflam'd with Theory and such like slender Appendages. The *Italians*, particularly Mr. *Fab. Calvus*, *Martianus*, *Septalius*, &c. were the first that shak'd off the *Arabian* Yoak, and used their utmost Efforts to restore the primitive Wisdom of the *Grecians*, with reference to Physick. After them the *French* embark'd in the same Design, particularly *Duretus*, *Ballonius*, *Hollerius*, and *Jacotius*. These worthy Authors manag'd their Provinces with such distinguishing Excellency, that if they did not go beyond the *Grecians*, at least it must be  
own'd

own'd they chalk'd down the true Method of Cure according to their Prescriptions. This Doctrine being communicated to a'most all the Universities in *Europe*, it excited at the same time other learned Men, to inlarge and confirm it.

### III.

Scarce had the Practice of Physick arriv'd at this State of Tranquillity, when the upstart *Paracelsus*, back'd by all the Gang of Chymists, rais'd a new Tumult, and laid fresh Cloggs upon the true Practice. Nor was this long past, when *Helmontius* with his Retainers inlarged its Troubles, in so much that all the Conclusions of natural Things were chain'd down to a Chymical Furnace. It must be own'd indeed, that these two noble Authors have considerably enrich'd the Practice with a new Invention of Remedies, which all Physicians ought chiefly to have in View; and have done very good Service in striking out some Prejudices, that had crept into Physick, through the Ignorance of the *Arabian* and false Interpreters. But when both the one and the other take upon them to account for the Causes that give rise to Diseases, and the *Phænomena* that accompany 'em; being prepossess'd (themselves) either by the reading of Books, or the flirting Experiments of the Furnace, they lay all their Stress upon the Philosophical Hypothesis of their own three Principles, without ever descending to Practice, or making their Remarks, whether the Historical Progress of Diseases, and the Efforts of Nature in promoting or opposing 'em, are exactly answerable to their Arbitrary Opinions. By this means it came to pass, that they not only disturb'd the Repose, that Physick

then



then enjoyed, but likewise were forc'd, tho' against their Will, to see in their own Practice the very Errors they had censur'd in the Galenical; for their Design did not rest in unhinging the false Method used by the Galenists in the Prescription of Remedies, which indeed wanted to be corrected; but it extended to the exploding of the Remedies themselves, namely, Bleeding, Purges, Blistering, Plasters, and the like, as being useless and pernicious to Mankind. Now whether this proceeded from Ignorance, or from Spite to the contrary Sect; 'tis still certain, that in this Age it has rais'd so much Confusion in Physick, and such Differences and Feuds among Physicians; that instead of a regular and correct Practice, we meet with nothing but a hungry Barrenness, starv'd with Want and wasted with Contention, which at once robs us of the Liberty of thinking and judging, and drives us a long Way back from the true Path of instructive Nature.

## IV.

No sooner was the Chymical Bustle pacified, than Practice was brought into fresh Trouble, by so many new Systems of Philosophy, that this fertile Age has produced: I mean the *Cartesian*, the *Democritan*, the *Mechanical*, the *Physico-Mechanical*, and an Infinity of other Systems; the Founders of which and their Retainers, tho' unacquainted with the first Elements of Physick, had nevertheless the Self-sufficiency to dip into that Science, and form Conclusions of the History of Diseases from their speculative Institutions. In Imitation of them the Physicians became altogether Philosophers, and being allur'd with  
the

the Tranquility of abstractive Wisdom, rais'd up a contentious and wrangling Sort of Philosophy, in the room of the Practice of Physick, which can't well be sever'd from a Bed of Sickness. And considering, that for almost fifty Years last past, the World has been so much amused with Novelty, that very few have applied themselves to solid and attentive Practice; we cannot think it strange, that the numerous Physical Books publish'd within that Space of Time, have nothing in 'em but pure and abstractive Philosophy, at a time when the Conclusions form'd upon the Motions of Nature are tumbl'd down and shatter'd, and the very Principles of Practice are handled down in such Perplexity, that the most accomplish'd Physicians are at a Loss to determine, what Positions to entertain, what Author to credit, and what Course to steer in pursuing the Cure of Diseases. Upon the whole, if we maturely weigh the present State of Practice, we'll find it under violent Commotions, and extremely perplex'd with lean and empty Axioms, and some false general Positions, deriv'd either from the divers Sects of Physicians, or the preposterous Laws of Method, or from the favourite Notions and Prejudices peculiar to each Physician. If we measure its Age from the foregoing Observations, we'll find it still within the very Boundaries of Childhood, and that very little time has been spent in improving it; for setting aside the happy Times of the *Grecians* in which Med'cine flourish'd and was almost at a stand, the *Arabians* trampled it under Foot, and the *Latins* indeed better'd its Condition, but did not improve it much. And so of the rest.



## C H A P. XI.

*Of the Sources of Theory and Practice.*

## S E C T. I.

A Physician can never recover his ascendant over Nature, without a dutiful Obedience; for Nature is conquer'd by obeying and humouring her, I mean in the Way of Practice by Observation, and that of Theory by Dissection; and in regard the Basis of Theory is lodg'd in Philosophy, that sort of Philosophy must illustrate the Theory of Physick, which dissects Nature, and makes a due Separation of its Parts. Such was the View of *Democritus's* School, and of a great many experimental Philosophers of this our Age, whose Industry has without Dispute enrich'd the Modern Theory, with a vast Stock of Certainty. It being therefore once known and acknowledg'd, of what Importance Observation is to Practice, and Dissection to Theory; the Mind being constantly equipp'd with Subsidies from each, will form Indications of Cure that may be depended upon for a Certainty, and last unshaken thro' all the Periods of Time, abating from what Allowance is to be made for the Unconstancy and Vicissitude of things.

## II.

'Tis an ancient Proverb, That the Drinkers of Water cannot entertain the same Sentiments with those

those who drink Wine. And indeed it hits the Physicians nicely, they being now divided into such various and opposite Sects: For we may say of 'em what Sir *Francis Bacon* applies to the Philosophers, that many of 'em, both Ancient and Modern, have swill'd down a raw Sort of Liquor, such as Water, which either sprung naturally from their own Conceptions, or was pump'd up, like Water out of a Well, by Logic. So that 'tis no Wonder if their Sentiments are vastly different from those of *Hippocrates* and his Followers, who drank and transmitted to Posterity a Liquor drawn from an infinite Number of the Grapes of Observations, and those gather'd in Bunches in due Season, and in time of Maturity, squeez'd in a Press, purg'd and clarified. In earnest, these sagacious Men were sensible that the Diseases of humane Bodies can't be appeased by the abstractive Opinions and Systems of the Brain, to which the Industry of Men should be nail'd down as to a Pillar: They wisely perceived that the stooping of our Genius to real things, the conquering of Nature by Submission and Obedience, and the stubborn Patience of Observation, do bring to light such Precepts as will be own'd by all the *Posse* of the Physical Train to be the fix'd Standard of Health.

### III.

Hitherto Physick has been too curious and minute upon empty Trifles, it has been senseless and severe in contemplating and commenting upon the Works of a few Men; and dull and short-sighted in tracing the Effects of Nature and of Diseases. No wonder then, that being till cramp'd within its ancient Bounds, 'tis at a



Loss to fix upon any thing that is certain, with reference to the consummate History of Diseases; as well as the Indications, Remedies, and Precepts peculiar to each Distemper. We can't think it strange, that being in this Condition, it should still run further into Confusion, and be as 'twere mir'd. 'Tis no Surprisal, that while 'tis exalted with the Fumes of Speculation, it undergoes the same Fate with the Statues and Idols of the Heathens, to which Homage and Adoration is paid, tho', at the same time, they neither are mov'd nor receive any benefit. Whereas, on the other hand, the Mechanical Arts that glory in Experiments, grow and improve every Day. These General Observations being thus premis'd, we come now to enquire what Improvement the ancient and modern Physicians have added either to Theory or Practice; and how far either of these can reach in the due Cure of Diseases.

#### IV.

The Theory of the later Authors, is much more certain, than that of the Galenists. For the former is grounded upon Experiments made with Diligence and Repetition, and drawn from the Storehouse of Natural Philosophy: It lays down, and demonstrates the Causes and Symptoms of Diseases, not by uncertain Conjectures, but by Mathematical Truths, that shine as clear as the Sun; and has carry'd the Demonstration so far, that what became barbarous in the Hands of the Barbarians, and was call'd in question by the learned World, does now shine in a clear Light, the Cloud of Ambiguity being happily dispell'd. On the other hand, the Galenical Theory does not only seduce weak Minds from  
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the true Road of Practice, by an idle Train of Questions; but by a nauseous Repetition of Things already said, a Barrenness of Invention, and an Ostentation of Logical Quibbles in refuting and retorting Arguments, covers its Practice with the greatest Obscurity, and tacks the Cure of Diseases to uncertain and obscure Indications. Hence it came to pass, that such Indecencies, Absurdities, and scandalous Feuds, have at all times prevail'd among *Galen's* Sect. As for the later or modern Physicians, as I have already done Justice to their Theory, so I can't but prophesie, that a regular and successful Character will attend their Practice in time to come. There is scarce any Science, but what in these our Days does, by the singular Bounty of the Almighty, boast of Repose and Ease, after being so long toss'd, and advances very considerably; only the Practice of Physick, by I know not what fatal Mischance, lies still mew'd up in its ancient Limits, and lags far behind the Theoretick Part.

## V.

The Galenical Practice is infinitely preferable to that of the Moderns; for if we consider the Shrewdness and Importance of either their Diagnosticks, Prognosticks, or Cures, tho' blended with such Dregs of Theory, we'll find 'em worthy of Commendation. This Happiness of our Ancestors in the Way of Practice, seems to be only owing to that immortal Patience in making Observations, by which they firmly resolv'd to adjust all the Periods of the History of Diseases; and that not faintly, or by Starts, but in a grave, discreet, and mature Order. And



the Light of Nature and Experience being constant and perpetual, the Observations deriv'd from thence, could not but gain a further Confirmation and Approbation, in so long a Series of Years. This we observe in a distinguishing manner in *Hippocrates*, who, like an inspir'd Prophet, foreseeing the Risque that Physick would run, if destitute of mature and repeated Observations, was the first that trod the Path of continu'd and heap'd Experience; and, in his Enquiries after Nature, consulted rather Nature her self than his own Thoughts. By this means, he conducted the Physical Tribe to the true Springs of Diseases. But the Moderns follow'd another Course, having, by virtue of Dissections and Experiments made upon natural Things, attain'd some Certainty in the Way of Theory, they fancy'd that this Theoretick Certainty would redound to the History and curative Conclusions of Diseases; without apprehending that these requir'd a new and peculiar Exercise. Being buoy'd up with this Fancy, they not only bent all their Thoughts and Labour upon the Theory alone; but, which is yet worse, they form'd Conclusions of Practice from the Rules of Theory, and, by confounding the one with the other, perplex'd the whole Art, and gave occasion to the pernicious Errors that Physick groans under at this Day. 'Tis the Office of Theory to give the Reasons of the *Phænomena* that accompany Diseases; to make a just Comparison between the antecedent, and the concomitant Symptoms; to trace the occult Causes of Diseases, and the true Source of these Causes; and, in fine, to explain and account for several other things of that Nature; by which means the Physician may be enabled to proceed

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more openly in adjusting the Indications, and depart from the precarious Measures of Empiricks. But the peculiar Business of Practice, lies in managing the History of Diseases, in judging of the Administration of Remedies, and the Satisfaction due to Indications, and adjusting all the weighty Concerns relating to the Cure of Diseases, pursuant to the Laws of Experience. He who pursues a contrary Course, and promiscuously forms his Notions of Practice from the Rules of Theory, will never be a happy Practitioner. But give me the Man that diligently peruses the Writings of the ancient Practitioners, that retain'd to the School of *Cools*, and with his utmost Efforts imitates their singular Solidity of Practice; I'll warrant you he'll be a Friend to Truth. Let me advise you, young Men, to reject evil Counsel, and manfully pursue this noble Study; the Study of the ancient Practice, from which, as from liberal Fountains, we derive all our Knowledge of practical Wisdom; and indeed we meet with no Piece of Learning that's either more useful, or more praise-worthy.

## VI.

As for the other Head of Discourse, whether Theory or Practice is of most use in the cure of Diseases; you must know in the first place, that the ancient *Grecians* were strangers to the Subdivision of Physick into Speculative and Practical. This fatal Division was first minted by *Jerain*, an *Arabian* Doctor that was either bewitch'd with the Pleasure of Speculation, or scar'd with the Labour and Drudgery of Practice, in compiling the History of Diseases, and tracing their obscurest Causes. And soon after he was blam'd



for it by *Alcorazoen*, as *Averrhoes* informs us, *Traët. 1. Part 1. Super Cauticos*. In earnest, 'tis no strange thing that this Division is not mentioned in the Monuments of the *Coon* School, and of the ancient *Grecians* down to the Time of *Galen*; for as I said above, again and again, the Professors of that School laid down this for a Certainty, That as Physick took its first rise from Observation, so 'twas to be learn'd and apply'd to publick Use by the means of Observation: And what we now perform by the Rules of Theory, was acted by them only by a quickness of Apprehension, confirm'd by long use; by virtue of which they adjusted the Indications of Cure, after a narrow survey of the Observations they had formerly made upon the Nature and History of Diseases, and seriously accommodated to the benefit of Man. In the mean time, up starts the Empirick Sect, which exploding all Theory, and disclaiming all manner of Reasoning in the verge of Physick, trusted to Experience alone in the Cure of Diseases; and this their Experience was not repeated, but stupid and supine; not found out by a Thread of Design, but dropt from Chance, and Mountebank all over. By this means Physick was over-run with such numerous and prodigious Absurdities, that she had sunk intirely, if *Galen* had not appear'd on her behalf about the first Century of Christianity, and stem'd the Current of growing Error with a speedy and present Remedy; I mean by instituting, or rather prudently and vigorously confirming a Sect of *Rational Physicians*. This Society, which I call *Rational*, stood upon two Pillars, namely, Reason and Observation; but at that Juncture of time the greatest Deference was paid to Reason; partly, because they were

afraid

afraid of stumbling upon the Errors they had charg'd upon the Empiricks, that went upon false Observations; and partly, in regard that the nimble and clean way of Reasoning, aspir'd to by *Galen* and his Followers, took more with the World, than the harsh Patient, and repeated Way of Observation injoin'd by the School of *Coos*. So, from that time, there arose a sort of Distinction between the *Reasoning* and the *Observing* Part of *Physick*, which came to be more frequently took notice of in the ensuing Ages; till at last the *Arabians* brought in an open Divorce under the Heads of *Speculative* and *Practical*, which continues to this Day. This Speculation or Theory, being all of it rear'd upon some Philosophy or other, the Tenets of which were the Standard of its Rules, it has been diversified in Proportion to the Variety of Philosophical Systems; and thus has the Practice of Physick had so many various Turns and Shapes. *Valesius*, a very learned Author, interlac'd his Writing here and there with several Practical Precepts; and, perhaps, would have inserted more, if his vigorous Appearance on the behalf of Logick, had not put him upon determining the History and Cure of Diseases, by the Rules of that wrangling contentious Art. The same Charge lies against *Argenterius*, *Massarius*, *Mercatus*, and most of the *Galenists* that flourish'd in the Three Centuries preceding the last; particularly *Capiracius*, whose Works are sharply censured by *Gasp. Hoffman*, upon the abovemention'd Score. But in this Age, in which natural and experimental Philosophy has been happily pursu'd and improv'd, and the Theory of Physick grounded upon it: who would not think that Practice is thereupon



set in a true Light, and recommended with a due Confirmation.

## VII.

Since Physicians began to examine the Structure and Actions of a living Body, not by Physico-Mechanical and Chymical Experiments, but by Geometrico-Mechanical Principles, they have not only discover'd an infinite Number of Things that were unknown to former Ages ; but have made it out, That a Human Body, as to its natural Actions, is truly nothing else but a Complex of Chymico-Mechanical Motions, depending upon such Principles as are purely Mathematical. For whoever takes an attentive View of its Fabrick, he'll really meet with Shears in the Jaw-bones and Teeth, a Phiol in the Ventricle, Hydraulick Tubes in the Veins, Arteries, and other Vessels, a Wedge in the Heart, a Sieve or Straining-holes in the Viscera, a Pair of Bellows in the Lungs, the Power of a Leaver in the Muscles, Pulleys in the Corners of the Eyes, and so on. And tho' the Chymists explain the *Phænomena* of natural Things, by the Terms of *Fusion*, *Sublimation*, *Precipitation*, &c. and so make a separate sort of Philosophy ; yet all these ought to be imputed to the Force of a Wedge, Balance, Leaver, Spring, and such like Mechanical Principles. Now, since the Natural Effects of an animated Body can't be accounted for with greater Facility and Clearness any other Way, than by those Mathematico-Experimental Principles, by which Nature speaks her own Mind ; I am likewise of the Opinion, that the preternatural and morbid Effects can't be demonstrated with more Certainty and Evidence than by that

same

same Method; and so I conclude, that the Theory which stands upon such Principles, ought to be reckon'd more certain than all the rest. Indeed if all Diseases sprung from the Disorder of the solid Parts, the Origin and Causes of the preternatural Effects we meet with in them, would questionless be easily pointed to by the abovementioned Principles; But considering that the greatest Part of 'em owes their Origin to the various Complexion of Fluids, we must not be surpriz'd to find, that the true and genuine Cause of Diseases, can never be found by Theoretick Philosophical Principles. For the ablest Philosopher and the greatest Master of the best Hypothesis that is, will be forc'd to acknowledge, after all his Meditations and Labour in tracing the true constituent Parts of any Humours, That the *Minima*, or least Particles of any Humour of the Body whether natural or sickly, lie beyond the reach of all Art and Speculation: And all the Advances of Physicians upon this Head are nothing but Wild-fire, that do not so much as touch upon the Substance of the Thing. But after all, tho' the true Configuration and Texture of such Humours is unknown to us; yet in the way of Practice, 'tis sufficient that we have learn'd by Experience the various Progress, Exit, and Declension of their Motions; for being excited and directed by Nature, they unfold to us the true Springs of Indications, for the exhibiting or shifting of Remedies. Now, these Truths being premis'd, we can't but confess that the Art of curing Human Bodies is acquir'd only by Use and Exercise; and consequently, that Practice is of more Importance than the Theory, to the Cure of Diseases, (which was the second Head of Discourse.) The subtiler a  
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Mathematician is he runs the Divisions of Nature finer; and therefore I would not have you to take all your Conceptions of Physick to be Truths, till they have stood the Test of Practice. What repeated Experience recommends to you for a Truth, that you may always depend upon as such. You can't judge whether Wine is good or bad, without tasting it: He'll ne'er make a perfect Musician, that does not practice singing; nor an accomplish'd Soldier, that never visits the Field. Men hatch a great many things in their Closets, that they take to be reasonable, and indeed certain; but when they descend to Use and Practice, they find 'em to be not only absurd, but in a manner impossible. And on the other hand, how many things are there (especially if we talk of Cures and Remedies) that upon their first Proposal are branded as useless, and inconsistent with Reason; and that either because they do not jump exactly with our Hypothesis, or because we know of no probable Reason to enforce them: And after all, when we put 'em upon the Foot of Practice and Experience, we find 'em both useful and certain. Upon the whole, 'tis to be hop'd that Physick would receive much more considerable Reinforcements, if in time to come the World would allow to Theory and Practice their respective and peculiar Claims.

## C H A P. XII.

*A Method propos'd to young Beginners, of forming a just Hypothesis of Diseases.*

## S E C T. I.

SUCH Things as are grounded upon Nature, improve and come to Perfection; but that which has no other Root but Opinion, varies, and fails of Increase. A notable Instance of the latter we have every Day in the Physical Matters, that are built upon an uncertain and purely opiniative Hypothesis. Nay, if we were to make a strict Enquiry after the chief Impediment that has contributed more than any thing else, to our not having any certain and standing System of Physical Matters, we'd find it to be this, That Physicians would not join and duly suite the Force of their Mind to that of Experience. *Cesalpinus*, a very acute *Italian*, made the first Discovery of the Circulation of the Blood, and reckon'd the Circulation was perform'd in the Space of 24 Hours, as he tells you at large, *Quaest. Peripat. Lib. 5. Quaest. 4.* But in regard 'twas only a Pointedness of Thought that led him to this noble Invention, and that he never consult-ed such Anatomical Observations and Experiments of natural Things, as were proper for improving the Thought; we can't think it strange that he left the Discovery unfinish'd, and, like a Dialectick Combatant that confided too much in the Strength of Wit, fell short of the Victory. *Harvey* taking notice of this, resolv'd to consult  
not



not only Reason, but Experience upon the Head; and with that View he tortur'd Nature with Experiments, and teas'd her with Anatomical Dissections, till he forc'd her to confess the Truth. Thus did he, beyond the Expectation of Mankind, compleat the immortal Invention of the Circulation, by a Sort of Mixture of Reason and Experience. The Discovery thus finish'd, flew speedily like a Messenger of Truth across the Seas, and over the *Alps*, and coming with admirable Celerity to the Knowledge of all the Universities and Colleges of the whole Physical Orb, was entertain'd and approv'd of, *nemine contradicente*. For this Reason, I presume, 'twill not be like the Winds, which tho' violent in the Quarter from whence they come, are broke and lower'd when they reach the remoter Regions; but will undergo the same Fortune with the great and huge Rivers, which are large indeed at the Head, but receiving perpetual Supplies in their Progress, enlarge their Channel, and swell higher the further they go from the Spring.

## II.

The Knowledge that Practitioners have hitherto boasted of, has been the Product of Opinion, and not Nature. To pass over other Instances in Silence, we shall only touch upon a Fever, concerning the Essence of which there has been so many Hypotheses contriv'd in this Age, that a Man of Sense cannot but be stunn'd when he thinks on it. *James Sylvius*, in conjunction with all *Bentekoe's* Followers, was of Opinion, That Heat is not the Cause, but the Effect and Symptom of a Fever, and that a quick Pulse is not a Sign of the swifter, but of the slower Motion

tion of Blood; so that he plac'd the Essence of all Fevers in the coagulation or incrustation of the Blood. Going upon these Topicks, he banishes Bleeding and cooling Remedies from the Cure of Fevers; and, on the other hand, recommends spirituous and volatile Ingredients, and such as dissolve the pretended coagulation of the Blood; and these he prescribes promiscuously in all Fevers, and in all the Periods of the Distemper. These Absurdities he runs to in pursuance of an Hypothesis that sprung from his own Brain, and not from the History of Matter of Fact. *Helmont* and *Campanella*, whose Tenets are much the same, asserted that a Fever is not a Disease, but the Remedy of a Disease, call'd up chiefly by Nature, in order to throw out a peccant Matter blended with the Humours. For this Reason their chief Aim in the Cure of all Fevers, was, to feed and increase the febrile Fire, by heating Remedies, and such as, to use their own Words, corroborate Nature, and enable her to dislodge the Enemy that hangs upon her Shoulders, with greater Facility and Expedition. *Henricus Scretæ* reviving the Opinion of *Diocles*, when buried almost in Oblivion, derives all Fevers from the Inflammation of the Viscera; and upon the Consideration that an Inflammation presupposes an Obstruction in the Vessels, or, as he speaks, a Hindrance to the Circulation of the Blood, he condemns Bleeding, Purging, and such other Remedies as cool and moderate an overbearing Heat in the Blood; and throws the whole Cure of all Fevers upon dissolving, spirituous, and alcholine volatile Remedies, or such of that Form as discuss the pretended Obstruction and Inflammation of the *Viscera*. The *C Cartesian* Philosophers invented a new Hypothesis of Fevers,



Fevers, in pursuance of their own Principles : Their Sentiments were, that in a natural State the subtil Matter ranges continually thorough the Blood with great Celerity, and passes through its Pores in a strait Channel ; by which means it produces and feeds the natural Fermentations in the Humours : But if it so falls out that these Pores are put into Disorder, and stuffed with a grosser Substance, the swift and continued Thoroughfare is thereby oppos'd ; upon which this Matter undergoing a violent Agitation, raises most vehement Motions in the Blood, in order to recover its wonted and clear Passage thorough that Mass. Now, this violent Commotion in the Blood is by them call'd a Fever ; for the Cure of which, they recommend such Remedies, as by their spirituous slender Particles are capable to discuss, dissolve, and throw out by Sweat, or the other Ways of natural Evacuation, that gross, thick Matter, that stuffs the Pores of the Blood, and makes them depart from a straight Line. By this means, say they, the subtil Matter obtaining a clear Passage, ranges thorough the Substance and Pores of the Humour, not impetuously, but gently, and in compliance with the Laws of Nature.

### III.

I presume no body is unacquainted with the Hypotheses of *Sylvius de le Boe*, *Bontekoe*, *Braanen*, *Jones*, *Piens*, and a great many more, that appear'd first on the North-side of the *Alps* : Nor can any Physician be ignorant of the Opinion of the *Galenists*, who in explaining the Essence of a Fever, being prepossess'd with a false Prejudice, that the Humours of Animals were  
capable

capable of Putrefaction, did not stand to affirm, that the greatest Part of Fevers derive their Origin from the Putrefaction of the Humours ; and being impos'd upon by the vulgar Opinion, that Humidity is the Mother of Rottenness, declaim so violently against the drinking of Water in Fevers, that they would suffer their Patients to run the greatest Risque, rather than to allow them one Drop of Water ; and accordingly we have a great many Instances of Persons that dy'd of Fevers, in which Water was prohibited, whose Heart and Lungs were found to be dry and wither'd. These things premis'd, 'tis obvious, that among so many Opinions and new Inventions of this Age, the Nature and Cure of Fevers is so far from being illustrated and asserted, that it is rather perplex'd and cover'd with Confusion. The Fever rages and burns still ; ay, it burns both in the Schools, and in the Patients Houses ; and the World would have groan'd under the spreading of that dismal Fire, if one Author, among so many, had not shone out in this Age, I mean *Thomas Sydenham*, the Imbellisher and Ornament of our Profession, who laying aside the Fictions of Opinion, applied himself wholly to Observation, and dwelt with Nature from his younger Years to a good old Age ; by which means he at last disclos'd a more probable Hypothesis of the Nature of Fevers, and a more plausible Method of Cure ; nay, his Learning and Sagacity was so much distinguish'd in the curing of Fevers, that his Countrymen commonly call'd him, *The Doctor for Fevers*. This I have been several times inform'd of, by the *English* Gentlemen that travel into these Parts.



## IV.

Whoever takes a narrow View of some of the Hypotheses of the Moderns, and the Ground-work they go upon, will perceive plainly, that what these Authors had in view, was to please and gratifie the World with a new sort of Speculation, or else, that they were ignorant of the Rules, that are proper to be observ'd in the contriving of such Schemes: For to instance in the Nature of Chylification (which will afford us a sufficient Taste of the rest) this Age has produc'd as many Hypotheses upon that Head, as there are Experiments from the Chymical Furnace, or the Philosophical Laboratory. Both the Chymists and the experimental Philosophers have observ'd, that from the Mixture of two or three Bodies, there sprung a third of a whitish Colour, affirm'd that the Chyle is elaborated in the Ventricles, and dispos'd to assume the Nature of Blood by an Artifice of the same Nature. And, which is yet more pernicious, they drew from these external, and, perhaps, fortuitous Mixtures of things the Indications of Cure for Crudities, Inappetency, and the other Disorders of Chylification, which ought to have been deriv'd from the aged Observations made upon such Diseases and their Symptoms. But besides the Falsity of the Assertion, that the Concoction, Separation, Dissolution, and other natural Functions perform'd in the Viscera, observe the very same Measures with those of a Chymical Furnace; this unreasonable Jumping from two or three Experiments of any Nature whatsoever, to the forming of general Systems, does not only block up the Way that leads streight to the unfolding of any thing,  
but

but drowns the Practice of Physick in fresh Errors every Day.

## V.

I would not have any one to think, that this harsh Way of treating the Hypotheses of the Schools, speaks me an Enemy to all Hypotheses: For, not to mention that I have always pursu'd that Study, and recommended it to others, provided they be exactly answerable to the Laws of Nature; my chiefest View in this Performance, was to establish a stricter Concord and Union between Observation and Hypotheses than we have yet met with. 'Tis true in giving my Sense of Hypotheses, I talk in this first Book harshly, and almost indecently: but that I was mov'd to, partly by the Extravagancy of the Physicians of this Age in hatching such Inventions, and partly by the preposterous Application of such arbitrary Schemes to the Cure of Fevers. The Ant gathers and applies its whole Collection to use: Just so do the Empiricks, who hunt up and down for Experiments, and those neither confirmed by repeated Observation, nor weigh'd in the Balance of clear Reason; and soon after make use of them without Distinction. The Spider spins all its Threads out of its own Body, without gathering Materials from abroad; and the same is the Practice of the speculative Physicians, who may be justly call'd sophistical. But the industrious Bee behaves itself better than the rest, it gathers indigested Honey from the Flowers, and then digests and ripens it in the little Cells of its Viscera; and, in fine, works upon it with great Toil and Labour, 'till 'tis work'd into the highest Degree of Perfection. Now, in our Profess-

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on, we want that sort of Physicians which imitates the Bee: For some of them treat Nature only by way of Abstraction, till they come to the potential and shapeless Matter; others again insisting too much upon Particulars subject to their Senses, but not examin'd by Reason, are sometimes so perplex'd with the Confusion of things that they condemn some things as being beneath their Regard; and others they dread, as being too difficult, and beyond their reach.

## VI.

When I consider the Power and Effects of the Imagination of such Authors, as have a wonderful Propensity for the minting of new Hypotheses, I observe they're drove upon the Study of Innovations, chiefly by two Motives; namely, either the Prospect of purchasing that Glory that is wont to be liberally bestow'd upon new Discoverers of Things, and Inventors of Opinions; or else, from their Disappointment in plodding a long time upon Books, in order to find out some probable Reason for Things, without meeting with Satisfaction; which puts 'em upon canvassing the Subject in their own Thoughts, and coining Reasons to themselves. And if it happens that these new coined Reasons please any Part of the learned World, they soon after endeavour to enlarge their Stock of Glory, by rearing upon 'em an intire System of the Universe, or of some whole Art. Now these Men being endow'd with a strong Imagination, can't hear of another Man's Opinion, but maintain their own stiffly, and take it to be more certain than all the rest. If by Reading or Experience they light upon any thing, that gives but the least Coun-

Countenance to their Hypothesis, they not only adopt it, and twist it in with their own System, but cry it up mightily as being a thing of the greatest Certainty imaginable. But, after all, that violent Passion for establishing their own System for ever, confounds the Ideas of the Mind a thousand Ways, and very often represents to 'em the Objects of things, not such as they really are, but such as they would have 'em.

## VII.

But for the Purpose. If you would have a perpetual and standing Hypothesis, of Necessity it must proceed not from the Author's Noddle, but from the things themselves, and must have an exact Connexion with Observations, and the fix'd *Phænomena* of Nature. A Specimen of this Truth, we have, among other Philosophers, from the Astronomers. The Hinge of all Astronomy turns chiefly upon this, that from Observations first made upon the *Phænomena* of Celestial Bodies, the Intellect should afterwards rise to Theory, or to Hypotheses nicely agreeable to the Rules of Geometry; that from a full and mature Survey of these Hypotheses, they may be able to foretel and adjust the Motion, Situation, and Conjunction of these Bodies. Accordingly, the Astronomer's first Care is to purchase a long Series of Observations; after which he aspires to Theory, in order to assign 'em a probable Reason. 'Tis true, the Astronomers have form'd several Systems of the Heavens, and those contrary to one another; namely, the *Ptolemaick*, *Copernican*, *Tychonick*, *Semi-Tychonick*, &c. But in predicting the *Phænomena* of the Stars, and computing their Motions; that is, in foretelling



Eclipses, the various Aspects of Planets, &c. they all keep close to the Truth, and do not differ a bit from one another. Now the Mystery of the Matter lies chiefly here, that, tho' a particular Astronomer may form in his own Mind a peculiar Theory of the Stars, yet all their Theories are drawn from the same constant Observations of the Celestial Bodies; for whatever one observ'd, is likewise observ'd by another. 'Tis only the Reason (going by the Name of Theory) why these Bodies appear and move after such a manner, that depends upon the Will of Men, and accordingly uses to be as various, as there are various Ways among several Men of thinking and explaining themselves: So that tho' they disagree as to the Reason and Theory, yet considering that every one's Reason is grounded upon the very same Observations of Celestial Bodies, 'tis no wonder they all agree in the Prediction of Truth.

## VIII.

Practical Physicians ought to follow the Example of the Astronomers, in forming the Hypotheses of Diseases: This they will be able to do, if they be once acquainted with the Language of Nature, and its Ways of Expression; that is, if they have been long employ'd in observing the Events of what is beneficial, and of what is hurtful. After that aged Observation has given them to know, that in such a Disease such a thing always happens, and that after a determin'd manner; then is the Season of raising their Thoughts to form an Hypothesis, and fix it upon the fore-said constant Motions of Nature, in producing or curing this or that Distemper. This Truth is

not only verified by Experience, but vindicated by Dr. Sydenham, in adjusting the Hypothesis of the hysteric Illness. This Author is of Opinion, that the hysteric Illness takes its Rise from the broken and languid Condition of the Spirits, upon which they fly out into Effervescencies and irregular Motions, and produce hysteric Convulsions, together with the adjoining Symptoms. The excellent Dr. Sydenham did not cull this Hypothesis from his own Fancy, as Men commonly do; but after a frequent and repeated Observation, that Bleeding, Purging, acid Syrups, and such other Remedies as enervate the Blood; that Grief, Watchings, Fasting, Food that gives ill Juice, and such like Causes, did either occasion or exasperate the Distemper; and, upon the other hand, that Steel, Venice Treacle, exhilarating and spirituous oily Med'cines, Riding, staying long in the Country, Wine impregnated with bitter Herbs, and the like, did either totally extirpate or mitigate the Disorder: Upon this Observation, I say, he did not stand to assert and form an Hypothesis, that hysteric Fits proceed from the broken and almost drooping Spring of the Spirits, and the Mass of Blood, its being depauperated, and stript of its nobler and balsamick Part. He steddily affirm'd, and made it out by Experiment, that the Indications of Cure ought to be fetch'd from this Hypothesis.

IX.

Considering the chief View of an Hypothesis, is to assign the Reason of the *Phænomena* of Diseases, that so the Mind may proceed with more Freedom and Clearness in singling out the Indications of Cure, 'twill therefore be equally necessary,



cessary, that it be grounded upon some general and most evident Principle, that's common to all Things. Now such a Principle can be nothing else but Figure and Motion: For Figure is still such as it really is, whether it be perceiv'd by Sense or not, or whether it be perceiv'd aright or amiss. And as for Motion, since there is no such thing as absolute Rest in corporeal Beings, and that all Bodies enjoy their particular Motion, to which they owe all their Alterations, for better or for worse: Upon this Consideration, I say, it can't be, but that the Reasonings grounded upon these two primary Qualities of Bodies, are entitul'd to a greater Certainty, than others that are tack'd to a Principle of a quite different Nature. This appears in the modern Theory, which being founded upon the Laws of Mechanics, Figure and Motion, affords a happier, and more certain Solution of the *Phænomena* of Diseases, than the Theory of the *Galenists* that was pinn'd to the empty Fictions of first or occult Qualities. And here, in confirmation of the foregoing, as well as of the present Thesis, I must take notice by the Bye, that tho' several Hypotheses may be form'd concerning the Breeding and Curing of Diseases, which are infinitely different, and sometimes feign'd, as it were for Diversion; yet while all of 'em appeal to the same standing and continued Observations of Diseases, they must all be equally happy as to the Cure, which makes a Parallel to what I observ'd but now of the Astronomers.

## X.

'Tis certain that Practice springs from a Mixture, as 'twere, of Reason and Experience, and  
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is confirm'd by the same: But in order to manage this Matter happily, and without Error, 'twill be necessary, above all, to take care that the one does not inroach upon the Prerogative of the other; that is, that the Power of adjusting and forming Judgments of Diseases, be allotted to Observation alone; that Reason or Hypothesis be allow'd the Province of solving the *Phænomena* of Diseases, and giving Reasons for the apparent Motions of Nature. For my own share, I stick to an Hypothesis, as long as I find it exactly answerable to the Footsteps of Nature; but if it swerves never so little from that Standard, I presently drop my Theory, and follow Nature, which is always the best Guide. For considering that the specifick Alterations and Depravations of the Humours, peculiar to every Disease, lie too too remote to be reach'd by humane Thought; we are forc'd to point our Cure, not to their essential Nature, but to their more general Cause; varying our Method now and then, either upon the spontaneous Advice of Nature, which it uses to give in the Eradication of Diseases, or upon our own repeated Experience, which gives us certainly to know, what Method is most proper to conquer such or such a Distemper. In the mean time, be it known to young Physicians, that there cannot be a more certain Sign of the Truth of Hypotheses, and certain Ways of Reasoning, than that of a happy Success in the Cure of Diseases, when regulated by their Prescriptions: If we find it otherways, we must not lay too much Stress upon 'em. Those who neglect this Caution, will fall into pernicious Errors, and give fresh Provocation to the ignorant Mob to upbraid the Physician with Ignorance.



## XI.

'Tis not Opinion, but certain and demonstrative Knowledge, that will do our Business: We must not dispute, but effectually try what Nature acts or will bear; and what we cannot reach by Speculation, we must not presently brand for an Impossibility in Nature, and so reproach Nature with the Infirmary of our Art. We must bend our Thoughts with all Diligence and Constancy, upon the disclosing of new Methods and new Rules for curing the Distempers we call incurable: for tho' some of 'em are in effect incurable, yet the greatest Part are only such, not from the Impossibility of the thing, but from our Weakness. History is evidence, that they have been cur'd several times by other Physicians; and I see no Reason why the Cure should not last as long as the Distemper. We ought likewise to employ our selves, in finding out new Means and new Measures, for the happier and easier Cure of the Diseases, that are commonly call'd curable. Let us display our utmost Efforts, that Life may be prolong'd, or that a Method may be found to keep back old Age; that the true Nature of the Blood, and other Humours, or their genuine constituent Parts may be sometime set in a clear Light; and that, either by Analogy with other Animal or Vegetable Liquors, or by the Help of a Microscope, when they are just taken out of the Body, and spread upon pellucid Glass; or by some other Analysis that may be more proper. Let our Care be to comfort and refresh our Patients in the very Agony of Death; for 'tis the most scandalous thing in the World for a Physician to turn his

Back

Back upon a Disease as incurable, and bid adieu to his Patient, two or three Days before he dies. We ought still to try new Remedies, and shift about upon several sorts, to the very last Gasp: for while the Soul hovers within the Body, there is still some hopes to be plac'd in our admirable Art. In fine, we ought to make it our earnest Business to find out specifick Remedies, and such as will infallibly answer every Distemper, not to mention the Infinity of other things that are still wanting in our noble Profession; to the end that God the Creator of all things, may enrich the Family of Mankind with new Blessings thro' our Hands.

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## C H A P. XIII.

*The great Importance of establishing Precepts, or certain and constant Rules, to be made use of, as a Standard, by a puzzled Physician in the ambiguous Events of Diseases.*

### S E C T. I.

**T**H O' we have shown in the foregoing Chapters, that Theory and Hypotheses are necessary both for tracing the Causes and Effects of Diseases, and for a Directory to Method; nevertheless when we come to the sick Man's Bed, we find they frequently frustrate our Hopes, in pointing to a Method of Cure; nay, sometimes we find our Patient benefited by what either is, or seems, contrary to the very Circulation of the Blood; which, undoubtedly is the surest Hypothesis that is: For this Reason I am of the Opinion, that  
nothing



nothing can be more conducive to our Profession, than the daily Investigation of new Heads of Precepts or Sentences, confirm'd by long Use and mature Experience, with Reference to the Diagnosticks, Prognosticks, and Cure of Diseases; for they not only seldom impose upon us, and that for the Reasons mention'd above, *Cap. 2. §. 7, 8. & seq.* but discover to us at first View, and without the long-winded Turns of Theory, the true and perpetual Indications of what's to be done. Nor is this Opinion of mine the Fiction of a timorous and doubtful Mind, but the very Method of Writing and Teaching, observ'd by *Hippocrates* in all his Books, and after him constantly pursued by all the wisest Practitioners. If that great Man had not been fully assur'd, that this preceptive Method was preferable to all others, and more conducive to the Benefit of the Sick, and the Confirmation of Physick; questionless, he would never have stuck so close to it, both in the Course of his Practice, and the Tenor of his Writings. In Imitation therefore of his Example, I purpose here to lay down some Precepts, which I know to be certain, either from the best Authors, or from repeated Observation in divers Hospitals of *Italy*. These will serve as a Pattern for young Beginners, by which they may take their Measures in tracing new Precepts every Day. They are as follows.

In the beginning of acute Diseases, Purgation is pernicious, especially if perform'd by violent Catharticks. 'Tis in vain to object, that many Fevers are stilled in the beginning by exhibiting a Purge; for if we consider the Matter narrowly, such Fevers are only gentle *Synocha's*, or such as arise from Food of bad Digestion taken in too plentifully, and stagnating in the first Passages.

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Such Fevers as are truly acute, do not come to a Period so soon ; for according to *Hippocrates*, their Crisis, appears much about the 14th Day ; and, in regard the Cause of acute Fevers is in the beginning of the Disease confusedly blended with the Mass of Blood, and deeply immers'd in it (which the Ancients call'd the State of Crudity) and consequently unqualified for Depuration ; if you exhibit a purging Med'cine in that Juncture, you'll either evacuate what is not to be evacuated, or kill the Patient ; or which I have frequently observ'd, exasperate the Fever, and make it double instead of simple, and produce an infinite Number of other Symptoms, that either were not before, or at least were much milder.

Further : In the beginning of acute Fevers, you must avoid not only Purgatives, but likewise volatile Diaphoreticks, and such other impetuous Med'cines : for at that time the Blood being over and above inflam'd, and altogether disabled for Depuration, by reason of the Crudity and Confusion of the peccant Matter that puts it into Agitation, 'tis irritated and set on fire by such Remedies ; upon which it repairs with a precipitant Course to the Head, or the other Viscera, and there produces fatal Stagnations, or many other Symptoms that did not appear before ; such as Deliriums, Watchings, symptomatick Sweats, Anxiety, Anguish, Thirst, and the like. For my own Part, I've observ'd nothing more frequent after the exhibiting of a Purge, or any other impetuous Med'cine, than the Exacerbation and Reduplication of the Fever.

In Inflammations of the Pleura, Intestines, Bladder, &c. If the Pain abates of a sudden, while the Fever and other Symptoms increase  
with



with an intermitting and low Pulse, know for a Certainty that a Delirium will come in the space of a few Hours; for it speaks that the Disease is turn'd into a Gangrene.

## II.

I have frequently observ'd, that such Pleuritic Persons, as came to have Imposthumes in their Ears, were all cur'd.

Those who in the beginning of a Fever had a Motion to vomit, and thro' the Negligence of the Physician, or the Impotency of weak Nature, did not actually vomit, I have found frequently to be seiz'd in the Progress of the Distemper with severe Loosnesses.

In an Obstruction of the Viscera, if the Face keeps up its natural lively Colour, you may readily undertake the Cure; for such Patients may easily be set right. But if the Face is very much alter'd, and the whole Body is over-run with an universal Paleness and Leanness, avoid to meddle with 'em if you can; for 'twill be a hard Matter to cure 'em. However, the Case is quite different in a Cancer of the Womb; for then the Face keeps to its natural Colour, and the Cheeks are of a rosy red Colour.

In a Peripneumonia, if the Fever, Cough, and such other Symptoms are exasperated the fifth Day, the greater the Exasperation is, the more Assurance you have that Death will ensue on the Seventh.

If you are troubled with sour acid Belchings, abstain from Wine, and you're cur'd: Instead of Wine make use of Water impregnated with Anise-Seed and Cinamon. After you're well, you may return to Wine again.

## III.

In the case of a Sciatica, if you exhibit a Purgative (Syrup of Buckthorn with Wine I commonly use) at the very Hour of the first Invasion, or at least a few Hours after, you'll find that after the Operation of this, or at most another succeeding Purge, is over, the Patient is certainly cur'd. But this will not hold, if the Disease is of several Days or Month's standing.

In all Diseases whatsoever, be sure you always mind the Tongue; for that affords a more certain and naked View of the state of the Blood, than any other Sign. All other Signs do frequently mislead us, but this seldom or never; and unless the Taste, Colour, and other Qualities of the Tongue return to their natural State, if you consult your own Credit, you'll never think the Patient well.

As many Days as the beginning of the Fever lasts, the same will be the Duration of the Increase, of the State, and of the Declension. And if the beginning be violent, malignant, or impetuous; or, on the other hand, mild and favourable; the same in Proportion will be the Character of the other Periods. So that a diligent and mature Examination of the beginning of the Disease, is the only Fund from which we can take our Prognosticks of the Duration or Event of a Fever.

When Spots appear in Fevers, take care you make no Effort upon the first Passages: For at that time even Glysters are much suspected.

The later that the Spots appear, and the nearer to the *Status* or Heighth of the Distemper, they're so much the better; for then the

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Disease tends to a Crisis and Concoction. And the Eruption of the Spots ought to be promoted again and again with Bezoardick and Diaphoretick Med'cines, taking care in the mean time to avoid a Looseness by all possible means. On the other hand, if they appear in the beginning of the Illness, they bear an ill Character; for they denote a great Fusion and Dissolution of the Blood.

In intermitting Fevers, if the second Fit is more violent than the first, and the third very gentle, you may depend upon it, the Fever will disappear about the fourth Fit. If the fourth Fit be very violent, and the fifth much slacker, the seventh gives an entire Solution of the Fever. If a Patient dies of an intermitting Fever, he expires commonly about the beginning of the Fit: We have very few Instances of those who die in the Increase, Heighth, or Declension.

In intermitting Fevers, the Urine is very red, and of a brick Colour; nay, Urine of this Colour, is almost a certain and peculiar Symptom of such Fevers. If the Urine be of a deep red Colour, and drops a Brick-colour'd Sediment when expos'd to the Air, let the Form of the Disease be what it will, you may rest assur'd, that it derives its Origin from the Ferment of intermitting Fevers. This I've observ'd again and again.

#### IV.

In several Diseases Remedies do more harm than good; and Benefit is reap'd from Motion and Exercise in the Country Air. 'Tis the constant Remark of all the most learned Physicians, that some obstinate and chronical Diseases, especially

cially those arising from Passions of the Mind, and Grief of long standing, admit of no speedier Remedy than riding in the Country Air.

In a very obstinate bilious Colick; in a Phthisick accompanied with a melting Looseness, and the other Symptoms of a desperate Case; in inveterate, hysterick, and hypochondriack Disorders; in a word, in all chronical Diseases, and such as arise from an Obstruction of the Viscera; after all other Remedies are tried to no Purpose, we find nothing better than riding out upon Horse-back; first, for a few Furlongs, and afterwards many Miles, and that chiefly in the Morning and clear sunny Weather. This is religiously acknowledg'd by the excellent Dr. Sydenham, and was mention'd long before him by Hippocrates, *Lib. de Diata*. 'Tis no Objection, that the Patient is too weak, and so low in Strength, that he cannot be mov'd in his Bed; for in that Case, the Exercise must commence first in a Coach, for a few Furlongs, and so proceed gradually to riding on Horse-back, and that for several Miles. For by this sort of Exercise occasion'd by riding, the Viscera of the Abdomen are gradually shak'd and jogg'd; the jogging of a Horse falling all upon the lower Belly of the Rider, and the rest of the Members being very little affected. By virtue of this repeated Succussion, the languid and almost flagging Spring of the Fibres is retriev'd; the diminish'd or obstructed Motion of the Humours and Spirits is rouz'd up; and what Viscidity sticks to the Glandules of the Viscera, recovers its lost Circulation. Now the Ferments of the Viscera being thus restor'd and exalted by a continued Course of Riding, not only their concocting Faculty, but even the Secretion of the Humours, is put upon



upon the primitive and healthful Foot; and the peccant Matter that has so long hung upon 'em, is thrown out by such Passages as Nature finds convenient. I ought not to conceal this Secret of Exercise in the way of riding from the Citizens of *Rome*, where the Atmosphere is almost perpetually clogg'd and foul'd with moist cloudy Weather; and consequently has but a small elastick Force; so that 'tis no Wonder, that it commonly occasions a loose Flagginess in the solid Parts of the humane Body, and a sluggish Inactivity with a sort of Clamminess in the Fluids. 'Tis for this Reason that the three Diseases, describ'd by the Learned *Petronius, de Victu Roman.* rage chiefly in this City; I mean, a constant Heaviness of the Head, a Weariness, and a costive Belly: From all which 'tis manifest, that in the Air of *Rome* the Motions both of the solid and fluid Parts become too languid; and that this Air will ever be the Bane of the Health of the Inhabitants, unless they call up and increase the Motion of the Humours and Spirits by exercising themselves abroad; that so the Humours and Spirits may have a clear Passage thro' their Pipes, and the Tone or Spring of both being thus retriev'd, Concoction and Secretion may be perform'd in the Viscera, and other Parts of the Body, pursuant to the Laws of Nature.

## V.

'Tis an ugly Sign, if about the beginning of the *Status* or the Height of the Disease, the Urine being reddish, and much loaded with great Plenty of excrementitious Contents, changes gradually to a pale and thin Consistence; if the Pulse becomes quicker, weak, and almost waver-  
ing

ing; if the Tendons start, especially while the Pulse is felt; if Talkativeness, fearful Dreams, and such other Symptoms appear. For in that Condition, you may expect the speedy Arrival of fatal Symptoms in the Head; namely, Deliriums, Watchings, Coma's, and even Disorders in the other Parts; but above all, the Change of the Fever into that of a malignant Form.

In Fevers, the Strength of the Spirits is known to a Certainty from the Pulse; so that if the Pulse be strong and equal, we always have good Hopes, notwithstanding the Appearance of Deliriums, Convulsions, Tremblings, and the other perverse Symptoms of the nervous Family. On the contrary, if the Pulse be very quick, weak, and wavering, tho' all the other Symptoms promise a Recovery, we are always apprehensive; for generally such a Pulse is the Harbinger of Death.

As long as Feverish Persons spit, they are out of Danger, in continual as well as intermitting Fevers. A foul Tongue is always suspected.

With respect to the *Phænomena* of a Fever, 'tis better known than any other Distemper; but with regard to its Constitution and Cause, 'tis the least known of any.

In a Cachexy or a Dropsy of the Breast or Belly, if a ruddy and indifferent good Colour of the Face, shifts on a sudden to a wan Lead Colour, the Patient will die suddenly in the Space of a few Days, or a Month at most.

The Children of great Men, are oftner killed with an useless Load of Remedies, than with the Force of their Illness; especially if their Illness is acute. Let me advise you, in such Cases, to use but few Remedies, and even those with Prudence and Caution.



## VI.

If a spontaneous *Diarrhæa*, or an acute Fever comes upon a Fit of the *Iliack Passion*, the Patient will die in a short time.

If a *Gutta Serena* follows an Apoplexy or Epilepsy, 'tis a Sign of Death, or at least of the Vehemence of the Disease.

In the *Iliack Passion*, the stronger Remedies you give, whether Purgatives or sharp Clysters, the more you constipate the Belly; for these increase the Frizzling and Contraction of the Fibres: But anodyne, emollient, and dissolving Med'cines are beneficial.

If an *Iliack Fit* is attended by a Suppression of Urine, Strangury, Hiccup, Inflation of the Belly, or Convulsions, the Disease is mortal.

Madness and Melancholy are so near allied, that oftentimes Madness turns to Melancholy, and frequently the beginning of Melancholy relishes somewhat of Madness; as the learned *Donæus* has well observ'd.

When Women are ill of a *Gonorrhæa*, or under their menstrual Flux, they have a livid Lead-colour'd Ring under their Eyes; which may be reckon'd one of the Diagnosticks of the Diseases of Women.

In acute and dangerous Diseases, a low, quick, and (as 'twere) staggering Pulse, is oftner follow'd by Death than by Recovery.

In acute Fevers or Diseases, the Urine, call'd *Subjugal* (that is, resembling the gross, muddy Urine of Oxen) is always a Sign of Disorders in the Head. If when this sort of Urine comes, the Pulse is low and weak, and the Patient is sleepy, or affected with a Heaviness in the Head,  
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you may prognosticate from thence that some sleepy Distemper, and particularly a Lethargy, is just at hand. But if that Urine is accompanied with Watchings, Head-aches, Thirst, a parch'd Tongue, a burning Heat in the Bowels, and the like, you may foretel that a Delirium, or Convulsions, or the other Disorders of the Nerves will be upon him presently. Tho' this *subjugal* Urine is an ill Sign in acute Diseases, 'tis a good one in some chronical Distempers; particularly, a Rheumatism, Gout, &c.

Some are wont to be troubled three Hours before Dinner with Disorders in the Stomach; particularly, a Pain the Stomach, Wind, Crudities, &c. And in such Cases, I have experienc'd the specifick Vertue of *Quercetanus's* Stomachick, given at that very time to half a Dram in a Dish of Coffee; especially if the Constitution of the Body be moist with viscid Humours; and above all, if the Person lives intemperately. The Tincture of the Bark of *Sassafras*-wood, extracted with Spirit of Wine, and given at that Hour, to two Spoonfuls, or even repeated several times a Day, dispels Wind in the Stomach, almost in a Minute of Time: And the same is the Vertue of the Tincture of *Ground-Ivy* drawn with the same Spirit.

Oil of Mint is beneficial in all the Diseases of the Stomach.

The Hectick Fever of Pocky Persons, tho' it seems to be desperate, is very easily cur'd, by carrying off the Seeds of the Pox with Specificks proper for that Disease.

In the continual Fevers of Women in Childbed, if they are seiz'd with a Difficulty of Breathing, 'tis always dangerous; for most of 'em die.



Among all the Signs of a dead *Fœtus* in the Womb, given in by Authors, a *Tenesmus*, or frequent Inclination to go to Stool, is the most certain, and next to infallible.

A Jaundice happening in Fevers, is always monstrous; and such Fevers are seldom without Malignity.

Sweet things are improper in Fevers; so you ought to avoid the use of Sugar; for it inflames the Disease, especially in Children, or in hypochondriack or hysteric Persons.

In malignant Fevers, above all things, mind the Eyes, Tongue, and Hands; a foul Tongue and trembling Hands are always dangerous in acute Diseases.

In the malignant Fevers, in which the offensive Humour is to be expell'd from the Center to the Circumference of the Body; before the Expulsion, there's a Difficulty of Breathing, and great Anxiety in the Breast, which decline by Degrees after the Expulsion is effected. This I have frequently observ'd in spotted and scarlet Fevers, in the Measles, Small Pox, and the like.

In a Plague, the sooner the Buboës break out, the better for the Patient; for by that means the internal Parts are kept clear of the Contagion.

The Itching of the Nostrils, is an infallible Sign of a simple *Synocha*; and so is a gentle Moisture upon the Skin, according to *Walschmid*.

I've observ'd several times, that a *Lipyrria* Fever (*i. e.* that in which the outward Parts are cold, while the inward burn) disappears immediately upon the Accession of a *Cholera*: But not so upon the Appearance of Sweat, or Urine; for which Reason Diaphoreticks and Diureticks ought to be cautiously us'd in such Fevers.

I never saw a bleeding at Nose succeed well in a Spotted Fever; especially if it be attended with many grievous Symptoms.

In Fevers occasion'd by the Alteration of the Air at *Rome*, I've observ'd that Sleep insued upon bleeding in the Arm; but not so in the Foot.

I made this Remark in the Hospital of *Rome*, in Summer 1693. That in acute Diseases, most of those whose Blood drawn by Venesection had a white chylous Crust upon it, recover'd; and those dy'd, whose Blood was very rutilant, or had too red a Surface.

I commence the Cure of all acute Fevers, by letting Blood, being taught so to do by Experience; for I have frequently observ'd, that the Bleeding was follow'd with a Sweat that eas'd the Patient.

In malignant Fevers, Bleeding in the Arm inflames the Disease, and turns its whole Force upon the Head; whence insues soon after Deliriums, sleepy Disorders, &c. But Bleeding in the Foot is beneficial. This Observation I made at *Rome* in the Hospital.

A Caustick apply'd to the Legs, cures the *Gutta Rosacea*, and other Rednesses of the Face, when all other Remedies are ineffectual: Witness *Mercurialis Lib. de decoratione, Cap. 13.* And this Observation I had given me as a mighty Secret by a very learned Physician at *Padua*.

In the Diseases of the Face, Purgatives are the principal Remedies; as we are taught, not only by Experience, but the Divine old Gentleman, in *Coacis*; where he speaks to this Purpose: *The Belly being mov'd to a frequent Evacuation of a small Quantity, takes off the Eruptions of the Face.* And again, *de Diata, Lib. 2.* Purgation draws the Humour from all Parts of the Body, and chiefly



from the Head, if it be hot. Now the Evacuation of the Head purges the Eyes, Nestrils, &c. and renders the Face cleaner and clearer complexion'd. So far Hippocrates.

The Fevers that commence with great Swoonings, or a Hiccough, or a Vertigo, are stil'd by Physicians, *Syncopales*, *Singultuosa*, and *Vertiginosa*. The Cure of such Fevers must begin with Vomits out of hand; for the Ventricle is the Seat of the febrile Cause; namely, a sharp gnawing Humour, which by twitching the Coats of the Stomach, and propagating its Influence by Sympathy and Consent, annoys the Heart, Diaphragm, or Head; from whence the foregoing Symptoms arise. The Vomit I commonly use in these Cases, is Oil of sweet Almonds, and warm Water. When the Vomiting is over, and the Salts thereby diluted, I presently exhibit testaceous Powders, with dulcifying Med'cines and Emulsions made with Whey, or the Decoction of Violets. By this Method I recover 'em happily.

The abovemention'd sharp Humour galling the Coats of the Stomach, is likewise in the Fault in such Fevers, or even other Diseases, as begin with a great Anxiety and Restlessness, in so much that the Patient can't stand still, nor avoid tossing in his Bed. And the only Remedy in such Cases, is a Vomit made of the Infusion of *Crocus Metallorum* in Wine; or of warm Water, with Oxymel of Squills: For the Vomiting is no sooner over, than the Patient is eas'd; especially if he be much troubled with the Heartburn, and other Disorders of the Stomach. Next to Vomits, you may give, by way of Precaution, the Powder of *Cornachini*.

The nearer a Fever approaches to the Height, the less we insist upon the refrigerating Remedies, for fear of opposing the Crisis: But in the beginning, they ought to be liberally prescrib'd; for then the overbearing Edge, Force, and Rage of the febrile Heat threaten dismal Symptoms, unless they be mitigated by the prudent Repetition of moistening and diluting Medicines, and the Motion of the Blood reduc'd to that Mediocrity, that's sufficient for making a Depuration.

The mortal Diseases of the Lungs, whether with or without a Fever, are, for the most part, attended towards the latter End with Disorders in the Head; namely, Over-sleeping, Lethargy, Giddiness, Dimness of the Eyes, &c. I've seen a *St. Anthony's Fire* in the Face speedily cur'd by the Prescription of a proper Purge; and this was one of the *Arcanums* of a *Padua* Physician, that was my very good Friend.

*Costiveness is good for old Men, and a loose Belly benefits the Young.* Celsus.

I have made the Observation twice, that those who are troubled with an obstinate Hoarseness, die Heckick within a Year.

The Pains of the Head arise, for the most Part from the Stomach; and if you are satisfied they do, make use of Stomachicks, Clysters, and a regular Diet. I do not speak of the pocky Pains and inveterate *Hemicrania's*, that derive their Origin from another Source.

## VII.

The Cautions of Nature must be obey'd; and tho' we can't fathom 'em, we must still obey; for its Progress is regulated not by fortuitous, but



by constant and perpetual Laws. This will appear more evidently from the following Instances,

A Woman at *Padua* was wounded with a Pistol loaded with very small Bullets, about the end of the short Ribs on the left side; the Whale-bone of her Stays being broke with the Force of the Bullets. In the Progress of the Cure, she was seiz'd with a grievous Cough, and cough'd up several Pieces of that Whale-bone, to the great Surprizal of those that were by. What Way Nature brought this about, is a thing unknown. After the Wound was cur'd up, the Woman was taken with an insufferable Pain between her Hips; the Pain was follow'd by a Tumour and an Inflammation, which came to Suppuration: This being open'd with a Lancet, the Surgeon took out from thence the little Bullets that had made the Wound in her side; and so the Woman recover'd perfectly.

A learned Man at *Rome* having took a Clyster of warm Water, kept it intirely in his Intestines; and not long after voided the whole Clyster by Urine, without the passing of one drop by Stool. And this, he told me, he had done frequently. *Benivenius* of *Florence* has much such another Observation in his *Observat. Rarior. Cap. 7.* namely, That a Boy of twelve Years of Age, after a Suppression of Urine for seven Days, voided it by Stool, and recover'd. Anatomists have been long at work, to find out Passages to convey Water directly from the Intestines to the Bladder: But their Labour has hitherto been in vain. *Bonetus* in his *Medic. Septentr. Tom. 2. f. 652.* and the Transactions of *England* for *Octob. 1670.* make mention of these new Ducts or little Canals; but the Truth is not set in a clear Light, and so they are not fully credited. In the mean time,  
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if one should assert, That the Water passēs into the Bladder thro' the Pores of the Vessels and Membranes, as the Hydropick Water passēs out of the Cavity of the Abdomen into the Intestines, by virtue of a Purge; would the Assertion be approv'd or disapprov'd? I leave the learned World to judge of it.

A Man of forty Years of Age subject to the Piles, was troubled a long time with a hard and prominent Swelling in the middle of his Breast; and having try'd to no Purpose all sorts of Remedies, both internal and external, for the space of nine Months, was seiz'd on a sudden with a hæmorrhoidal Flux; upon which the abovemention'd Humour disappear'd presently, and almost incredibly, and the Patient recover'd. This same Person is, upon a Suppression of the Piles, oftentimes troubled with a sort of red Swellings in his Fingers, which yield to no Remedies, but disappear the next Day after the Hæmorrhoids begin to run. Here I could insert several Instances of the wonderful Usefulness of opening the hæmorrhoid Veins, (notwithstanding the Circulation of the Blood) beyond the opening of other Veins; and that in such as are troubled with Pains or Heat in the Hypochondria, a Heaviness upon the Loins, Wind, Distentions, and Rumblings in the Intestines, and several other Disorders of the natural Viscera, besides other of the Vital and Animal. But in regard Hippocrates, *Lib. de Humor. & Epidem. 6.* has set down the Benefit of the hæmorrhoidal Flux, I shall content myself with inserting his Words. *Those,* says he, *who have the Flux of the Hæmorrhoids, are neither troubled with the Pleurisy, nor a Peripneumonia, nor eating Ulcers, nor Fellons, nor the little Swellings, call'd Therminthi from their Resemblance*



*semblance of a Vetch; and, perhaps, not with a Leprosy or Morpew.*

## VIII.

If Pleuritick Persons do not begin to disburden in the fourth Day, but on the contrary, the Fever and other Symptoms increase, being accompany'd with a great Difficulty of Breathing and Snorting, Death visits them on the Seventh; and in such Cases the Feet use to swell, and the Eyes to grow dim, before Death.

A Scirrhus of the Bladder bears an exact Resemblance to a Stone in the Bladder; pursuant to what I have seen twice in the Dissection of dead Corps.

Gross Urine, full of Sediment, whitish, viscid, and sticking to the Chamber Pot, is no inconsiderable Sign of a Stone in the Bladder.

Those who are seiz'd with an inward Aneurisma, or Rupture of the Arteries, die either suddenly, or of a Spitting of Blood. I would advise all such Persons to abstain from too much Motion, from Venery, Anger, spirituous Liquors, and whatever inflames or disturbs the Motion of the Blood. Let them use a Milk Diet, moderate Motion, and Food of some Viscidity.

Aneurisma's proceed from a Rupture of the Tunicle of an Artery: Varices arise from the Rupture of a Valve in the Veins; and the *Hydatides* are occasion'd by the broken Valves of the Lymphatick Vessels.

In all the Diseases of the Breast, especially a Spitting of Blood, and a Pleurisy, the thinnest Diet must always be prescrib'd; for fear the Blood swelling with too much Chyle, should  
drive

drive impetuously upon the tender Parts of the affected Lungs.

A hard Pulse is a constant Companion of a Pleurisy, as a soft Pulse is of all the other Diseases of the Lungs: And this you may place among the distinguishing Signs of such Diseases of the Breast as are hard to be known.

In a dangerous and suspected Fever, if a Swelling happens in the parotid Glands, without any great Pain or Suspicion of Inflammation, burn it presently with a hot Iron, to the end that the malignant Matter may be push'd outward, and thrown out by Suppuration. For otherwise the morbifick Cause may retreat to the nobler Viscera, and occasion Death. *Valesius*, among other Authors, recommends this Cure; and I have sometimes seen it perform'd with good Success, by the Direction of a learned old Physician, in the Hospital of *Padua*. If a Swelling of the parotid Gland appears symptomatically, it always portends Death; as *Riverius* has observ'd more particularly. If it comes critically, 'tis a good Sign. Now a *Parotis* is call'd symptomatick, if it appears at a time when the Symptoms are still high, and the Disease is rather inflam'd than abated.

If in Coughing, little things like Grains are brought up, and these Grains stink extremely when squeez'd with one's Fingers, they are a certain Sign of a latent Vomica or Imposthume in the Breast; especially if the other Signs accompany 'em. *Forestus* has observ'd, that in such Cases, upon the breaking of the Vomica or Imposthume, for the most Part, the Patient dies suddenly.



All the Suppurations of other Parts discover themselves by the accession of a Fever, and a Shivering; only the Suppuration or Vomica of the Lungs, steals on without the foresaid Signs. And this ought to be seriously minded by young Practitioners.

In an Imposthume of the Lungs, Abscesses in the Ears and Feet are good, according to *Hippocrates*; for a Vomica uses to discharge itself by these two Places, as its two principal Emunctories.

Oftentimes a Quinsey proceeds from a Suppression of the Terms or Hæmorrhoids; which ought to be carefully minded.

If a Quinsey that's truly inflammatory and sanguineous, as they call it, does not yield to two Bleedings, let scarify'd Cupping-Glasses be apply'd to the Shoulder-blades, and the Case will alter to the better. Of this I have seen several Instances.

I cur'd a Woman that was frequently subject to the Quinsey, by raising a Caustery in her Arm, after a fruitless Trial of other Remedies; nay, Causteries and Scarifications of the Shoulder-blades, are always beneficial in such Diseases as are seated about the Neck or Face.

In all occult Quinseys, if the Patient be seiz'd with a Pain in the side, the Pain about the Neck and Throat, and the Difficulty of Breathing and Swallowing being much abated; it signifies that the Quinsey is turn'd to a *Peripneumonia*. Now this Change is very pernicious; for either speedy Death or a Suppuration insues; as the Learned *Dodonæus* has well observ'd out of *Hippocrates*.

## IX.

In all Diseases, especially those call'd acute ; if an Inflation of the Abdomen appears and continues, 'tis the Harbinger of Death. Of this I have had infallible and frequent Proofs in the Hospitals up and down *Italy*.

If in acute or other mortal Distempers, the Tongue is cold, Death follows soon after. This Observation was communicated to *Riverius* by *Pecquetus*, and I have sometimes observ'd it myself.

If any Disease, if the Appetite be weak and sunk, and comes to be very keen all on a sudden, without any Crisis or Diminution of the Disease, the Patient will die soon after: for it signifies, that the Brain is disorder'd, and the sensitive Faculty sunk. This I once prognosticated, upon *Sennertus's* Authority, in the Case of a Girl that had been long ill ; and accordingly she dy'd next Day.

If a Patient, extenuated with acute or chronical Diseases, Wounds, or any other Way, voids by Stool black Bile or black Blood, as 'twere, he'll die the next Day : *Hip. Sect. 4. Aph. 23.* Upon the Credit of this Prognostick, I foretold Death four times in our Hospital.

A Leek-colour'd or green Flux of the Belly, denotes either Death or a Disease of long standing ; as I have oftentimes observ'd, especially in acute Cases.

In a Fever, if a great Swelling appears in the *Perinaum*, occasioning a Suppression of Urine, or a Constipation of the Belly, 'twill turn to a Gangrene and kill the Patient. *Tulpius* and *Cous. in Epidem.* I have experienc'd the Truth of this

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Prognostick in two several Instances, to my great Surprisal.

In a Fever, if the Patient does not sleep at all, but lies still without the least Complaint, and does not speak, but when a Question is ask'd him; and when his Pulse is felt, draws back his Hand in a trembling Condition and Hectick, as they call it, he'll certainly die. *River. in Observ.* I've seen many such Patients die in our Hospital. And, for that Reason, when you feel a Pulse, be sure to take notice whether the Hand trembles or not; for if it does, Death is very seldom put off.

In acute and pernicious Fevers, observe at all times whether the Face is much alter'd; if 'tis there's Danger in the Case.

If the Sides of the Nostrils are arched and raised, as 'twere, with a flat Nose and a ghastly Countenance, it portends Death; as I have frequently observ'd.

If a Pulse intermits in one Pulsation, it speaks present Death. Upon this Precept of *Galen's*, I predicted Death three or four times in acute Diseases, in our Hospital.

If in bleeding for a Pleurisy, the Blood does not get out, either for Pain or Thickness, order the Patient to cough forcibly, and 'twill presently gush out. *Tulpins.*

I do not know that any Author has yet tried, whether the Peruvian or Jesuit's Bark injected in Clysters, communicates its febrifugous Vertue to the Body. For my own Part, I try'd it lately at *Rome* in a Boy of five Years of Age, that was ill of a double Tertian Fever, and would take nothing down at the Mouth, which made his Case almost desperate. In the Morning I injected a scouring Clyster, and half an Hour  
after

after another Clyster, of a Dram of the Peruvian Bark with Barley-water; and the last being repeated every Day, the third Clyster dispell'd the Fever, and the Boy recover'd beyond all Expectation. This Adventure of mine, may serve to egg on other Practitioners to give further Confirmation of the Matter.

X.

Let Pleuritick Persons, and Women in Child-bed avoid Purgatives by all means.

The chief Diseases of Women in Child-bed, arise from the catching of Cold, the Passions of the Mind, and a plentiful cold Diet.

*Sal Prunellæ* is a Specifick in ardent Fevers.

A dangerous and copious Super-purgation is stop'd immediately, by exhibiting a Dram of *Venice Treacle* in Wine. This I have experienced, upon the Observation of the learned *Donæus*.

The two great Remedies for chronical Diseases arising from Obstructions, are Steel and Rhubarb. In my own Practice, I prescribe thus: Take of sulphurated Steel (or any other sort) fifteen Grains; Rhubarb in Powder, a Scruple: Mix, and drink above it a bitter and diuretick Decoction; not neglecting Exercise in the Morning.

The Chronical Diseases of the natural Viscera (or those of the *Abdomen*) are cur'd in great Measure, by riding out in the Country, and frequenting pleasant Places; especially if they depend upon the Passions of the Mind: For Med'cines are sometimes fruitless, and indeed hurtful; particularly, in such Diseases as proceed from a careful and anxious Mind: Of which, more at large in the ensuing Chapter.



## C H A P XIV.

*Of the Cure of the Diseases of the Mind; and  
the Method for giving their History.*

## S E C T. I.

**A**LL Men have their own Cares, and every one lies under a bitter Necessity of spending almost all the Periods of his Life, in attending the doubtful Events of his Labour. Now this being true, 'tis equally a Truth obvious to all Men, that a great Part of Diseases either take their Rise from, or are fed by that Weight of Care that hangs upon every one's Shoulders; especially among those who live high and plentifully: For such Men are more affected with the Motions of the Mind, than those of the Body; and the Diseases of their Bodies are frequently inflam'd by those of their Minds. Upon this Consideration, I would have all Physicians to be cautious and diligent, in putting Interrogatories to their Patients, with reference to the occasional Cause of their Illness; and particularly to the Passions of the Mind. This Conduct will be more seasonable, than that of running on without any further Enquiry, and promiscuously imputing all Diseases to a fabulous Fancy of Repletion and Cacochimy. For the Variety of external and occasional Causes, gives a various Turn to the Method of Cure; of which more at large, *Book 2. Chap. 9.* So that the levelling of the Cure of all Diseases at Repletions, is to my Mind a false Method. I own that Repletion gives Rise  
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to many Distempers; but the Passions of the Mind give being to more; especially among Masters of Families, or such as are loaded with careful Concerns, or those who sit in Places of Dignity, most of whom have other things to think of, than overcharging their Stomach with Gluttony or Drunkenness.

## II.

In order to a fuller Explication of this Matter, there are three Things that require a Solution; namely, whether the Passions of the Mind have an Influence upon the Body; how that Influence is convey'd, and by what means the Diseases arising from thence ought to be cur'd? That the Passions or Commotions of the Mind act upon the Body, is certain, and apparent from daily Experience. *Anno 1690. In Dalmatia, I* saw a young Man seiz'd with violent Convulsions, only for looking upon another Person that lay groveling upon the Ground in a Fit of an Epilepsy. The Writings of Authors are full of Accounts of the Power of Imagination upon the Organs of the Body; and to these I refer the Reader. A great many Men, who are otherwise strong and hale, eat their Meat sparingly and timorously, for fear of contracting Crudities, and so falling into Diseases: And, in the mean time, this their vain Fear and sickly Imagination occasions a bad Digestion of the little Food they eat, and that throws them into Sicknes. On the other hand, the Inconsiderate and Foolish, and others, who are not very sollicitous about their Health, will over-eat themselves, and yet digest what they eat, and enjoy a sound State of Health. Of this we have a signal Instance in the rustick

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and meaner sort of Persons, who have not so great a Struggle with their Affections, and know how to throw off all Sense of Grief and Care, by a certain Negligence in the Way of Life. Hypochondriack and Melancholy Persons, and those who are naturally timorous and inconstant, are oftner sick than other People, by reason that they cannot moderate aright, or check the Passions of the Mind, as I shall shew at large in the subsequent Part of this Treatise; and tho' the Diseases of such Men may at first View seem pernicious and incurable, yet they are wont to be easily cur'd, not by an overbearing Quantity of Med'cines, but by agreeable Conversation, or the Pleasures of the Country and frequent riding, or else by a Way of living adjusted by a prudent Physician. In the beginning of a Plague, many are seiz'd with it, and die of it, because they contract the Illness rather thro' Fear and Concern for the publick Calamity, than by Contagion: But in the Progress of the Plague, the repeated Observation of what happens, renders Men less fearful and wavering, so that they are not so easily seiz'd; and if they are, they are easier cur'd, pursuant to the Observations of creditable Authors. Women are more subject than Men to Diseases arising from the Passions of the Mind, and more violently affected with them, by reason of the Timorousness and Weakness of their Sex. This we see, above all, in the Diseases of young Women in Love. The Green Sickness, the frequentest Distemper they have, is cur'd, after a fruitless Trial of all other Remedies, by Matrimony alone, as the Learned *Panarolus* has well observ'd. From this, and several other Instances, a natural Inference may be drawn, that some Diseases are really produc'd by the Passions of the

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the Mind, and that the Power of Imagination has a great Influence both in producing and curing them.

## III.

Those who sicken upon the Disorder of the Mind, use chiefly to be seiz'd with the Diseases of the Stomach; as, among other Instances, appears from Persons afflicted with Grief, who complain first of a Faintness in their Stomach, and soon after, of an Inappetency, a bitter Taste in the Mouth, and Thirst in the Morning, acid and nidorous Crudities, Wind, Destention of the Hypochondria, and the other Symptoms of a disorderly Chylification. The Chyle being indigested and pall'd, for the foregoing Reasons, gradually infects the Mass of Blood; and the various Disorders of the Blood give Rise to divers Diseases, both acute and chronical; and paticularly to Obstructions of the Viscera, the Scurvy, hypochondriack Illness, &c. Students, and those that read hard, complain likewise first of their Stomach; and, by degrees, the Mass of Blood and solid Parts come to be affected. And indeed 'tis no Wonder it should happen so; for a great Quantity of Spirits being dissipated in both, by virtue of their over-keen and tiresome Thoughts, the Ventricle thus robb'd of Spirits, generates instead of good Chyle, an acid, viscid, and undigested Glue, which breeds Blood of the same Nature, that gives Rise to all the dismal Symptoms. Let this therefore stand for a Corollary, That in Diseases arising from the Mind, the chief Regard ought to be had to the Stomach, and the first Concoction; and the oppress'd and almost sunk Spirits ought to be rouz'd up and



exhilarated: So that we must not follow the common Course of commencing the Cure of all Diseases without Distinction, with Purgings, Bleeding, refrigerating and moistening Med'cines.

## IV.

If a Patient is seiz'd with an Illness during a Passion of his Mind, it uses sometimes to last as long as the Passion; and will rather shift to a Disease of another Form, than quit him altogether. I observed this particularly of late in a Woman of forty Years of Age, that was thrown by the deepest Passions of Mind into a great Flux of Blood from the Womb, of which she was cur'd, after using several Remedies for the space of three Months. But the same Concern, and Passions even of greater Violence, continuing for almost a Year, she was no sooner cur'd of that Flux of Blood, than she was seiz'd with a running from the Womb, that was sometimes white, and sometimes particoloured. After this Running was stopt, she was seiz'd with Anguish at Heart, Anxiety of the Breast, extream Weakness, Leanness, Inappetency, Thirst, a lingering slow Fever, a falling off of the Hair, and the like; which continued, and held out for six Months against all the Power of Remedies. To compleat her Misery, she was taken first with the Swelling of her Legs, then with and Ascites, and at last with an Universal Dropsy all over her Body. After all, being worn out with Care, and miserably tortur'd for five Months with a Legion of Illnesses, she remov'd to the other World.

Considering that the Spirits are mightily disturb'd by the Disorder of the Mind, and upon such Occasions are almost always distracted here  
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and there; 'tis no Wonder the Virtue of Medicines should be thereby impair'd, and the best Remedies should rather corrupt in the Stomach thus depauperated of Spirits, than give the expected Benefit. For Remedies do no good in a perturbed State of Life; and tho' they are taken in, their Motions are not obey'd. The Diseases therefore arising from the Passions of the Mind, must be gently and softly treated; and we ought to abstain with the utmost Caution from too many, as well as too violent Remedies. Above all we must take care of the Spirits, and rouse 'em up if they're oppress'd, or pacify 'em if sharp and irritated. If they are otherwise disorder'd, we must exhibit Remedies proper to their respective Condition; and especially recommend such Food as gives the best Juice, and exhilarating Wines to be drunk sparingly or plentifully, according to the Patient's Constitution.

V.

As for the Mechanick Way in which the Passions of the Mind produce Diseases, 'twould be requir'd to solve two very difficult Problems; namely, first, in what Manner, and how far the Humours and Temperament of the Body act upon the Soul, and change its Motions: Secondly, how, and how far the Motions of the Mind influence and alter the Body: But considering that the most tow'ring Genius's of all Ages, have fatigu'd themselves in vain upon this Solution; and that scarce any, besides *Cartes*, have advanc'd any thing upon the Head, that bears a Colour of Reason, it will be allowable in us to skip these knotty Difficulties, that relate but little to the Cure of Diseases. Indeed I take it to be



necessary for us, to pursue with Diligence what regards the naked and pure History of every Passion, and the Diseases that retain to it ; for few of our Profession have hitherto made any Trial that Way. We want a History of the Diseases that spring from the Cares of the Mind ; to set forth what Diseases spring from any Motion of the Mind, what Symptoms attend 'em, how they increase and decline, how long they continue, and into what sort of Distemper they use to change ; what Remedies allay, and what exasperate the Illness ; what proper and standing Method of Cure has been yet discover'd for each of 'em, and an Infinity of other things. For as Grief produces nothing more frequently than Loosenesses, which grow incurable upon the long Continuance of the Cause of Grief, and at last call in an erratick Fever, with a wasting of the Body, which cuts the Thread of Life. So Anger occasions a Looseness, or else a Fever, if it be very violent. Grief and the other Passions of the Mind, are capable directly to produce malignant Fevers, as we see in the Sieges of Towns, in which malignant Fevers rage in that Juncture, and are more dangerous than at other times ; this being occasion'd, according to the Opinion of the most Learned Physicians, by the Dejectedness of the Besieged. And as Diseases arising from Care are hard to be remov'd while the Solicitousness of the Mind continues, or else turn into Diseases of another Form, as I intimated above ; so a great many Things of this Nature, relating to the History of such Diseases, might easily be found out.

## VI.

It remains now to touch upon the Cure of such Diseases, and indeed it must be own'd before we go further, that almost the whole of the Cure lies in the Patient's own Breast ; that is, in a Mind well fortify'd with Patience, Fortitude, Prudence, Tranquility, and the other moral Vertues, without which all Manner of Remedies, and all the Efforts of Physicians, will be e'en almost vain and useles. For the Remedies in the Apothecaries Shops, that go by the Name of Exhilarating, Antimelancholick, Comforters of the Heart and Memory, Whets for the Genius, &c. are rather invented to favour the Pomp of the Art, than to dispel the bitter Cares of the Mind, or to rouze a drooping Spirit. I confess indeed that somewhat may be done against the Diseases of the Mind by such Remedies, as are able to change the Mass of the Blood thoroughly, and do not act superficially, but penetrate to all the inmost Recesses, both of the fluid and solid Parts of the Body. Such are frequent Bathing, the Choice of particular Food, or a Diet calculated for the Distemper, seasonable Exercise, travelling into Foreign Countries, hunting in pleasant Fields, and near the Sea side, continuing long in the Country-Air, and riding frequently, the use of Musick, Dancing, and the like ; all which, by virtue of the soft and gentle Delights they give to the Mind, do gradually repair the sickly Constitution of the Body, and reduce the disorderly Motions of the Imagination to their Primitive Regularity.



## VII.

That the Hinge of the Cure of Diseases of the Mind, is fix'd in the Mind itself, will appear from the following Particulars, that Experience has given us to know. 'Tis the Assertion of learned Men, that when Med'cines prove ineffectual, several Diseases are conquer'd at last by Patience, and Tranquility of Mind. And thence it is, that those who are drown'd in Domestick Cares, or affected with Passions of the Mind, if they are taken ill, they'll either find it hard to get through, or will be affected after a severe and unwonted Manner, unless they get quite clear of the foregoing Causes, or call up a due Moderation and Tranquility of Mind. This I would have all Physicians to mind, when they visit their Patients; for if their Case is such, Remedies are of no Use; nay, perhaps they'll do harm, if they be either too violent, or given to a great Quantity. The Women that are not timorous, do not not easily mark the Child in their Belly; neither are they too much subject to the Emotions of Imagination. A Man of unshaken Constancy and Firmness of Mind, that enjoys Tranquility in the midst of Waves, and is not seduc'd either with Hope or Fear; that Man (I say) is seldom seiz'd with Diseases arising from the Mind. And if he is, he will overcome 'em with the same Felicity that raises him above the Tumults and Turmoils of the World; and that without the Assistance either of Physick or Physician. On the other hand, those who are timorous, soft, tender, nice, peevish, impatient, and Slaves to their Affections; are not only oft'ner sick than other People, but bear a  
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heavier Weight of Illness when they are, and create an infinite Trouble to a Physician, upon the Account that they perpetually call up the Sense of their Illness by that assiduous Struggle of interfering Cares; and, by the continual Disturbance of their Spirits, vary and perplex the wonted and regular Periods of the Disease, and the Symptoms. Farther, a great many People severely wounded have been happily cur'd in a short time, because they bore their Wounds with Patience and Intrepidity; while others but slightly wounded, have speedily fall'n a Sacrifice to their own Fear and Despondency. Some thro' Indignation and Impatience, turn the slightest Disorders into long and mortal Diseases: Thus a Cough, contracted by Indignation and a customary Trick of Coughing, degenerates very easily into a Phthisick. On the contrary, others have strenuously surmounted the most weighty and afflicting Diseases; and that by no other means, but undergoing 'em with Heroick Constancy and Tranquility of Mind, and even bearing 'em patiently, as being the chief Monuments of our Corruption.

## VIII.

We therefore lay this down for a Certainty, that Diseases arising from the Care and Anxiety of Mind, will hardly be alter'd by Med'cines, unless the Mind be restor'd to a State of Tranquility, and gain the ascendant over the Passions, that so the turbulent and raging Spirits may recover their Primitive Harmony and Repose. So that when a Disease does not yield to proper Remedies seasonably prescrib'd, and proceeds after a strange and unwonted Manner, we ought



ought to suspect the occult Passions of the Mind, which a Physician may be inform'd of by the Patient's Friends and Attendants. Sometimes the Suspicion may run upon Venereal Contagion, or Hysterick Cases in Women, or Worms in Children; but of this more in the Second Book, Chap. 9. From what has been said, we may make this Inference by way of Corollary, That those who bear Trouble patiently, use seasonable Exercise, and live soberly, are not readily sick; and if they are, a discreet and prudent Use of Remedies, join'd to their wonted Patience and Tranquility of Mind, will quickly set 'em right. 'Tis likewise an obvious Inference, That the Physician who knows how to manage dexterously, and sway the Motions of his Patient's Mind, will happily extirpate Diseases that are commonly taken for incurable. In the mean time we must take notice that this Method is only to be pursued, when the Patient is *Compos Mentis*, and not affected with grievous, malignant, acute or delirious Diseases. In these Cases, indeed, we must insist upon the proper Remedies: But always take care to proceed gently and calmly; for such Diseases proceeding, for the most Part, from the Perturbation of the Spirits and Humours, violent strong Med'cines will add to the Flame.

## IX.

Thus we have shewn the Power of the Passions of the Mind, in producing and nourishing Distempers, and the Vertue of Constancy and Tranquility of Mind in surmounting 'em. But in regard such fortifying Ingredients are lodg'd only in the Patient's own Breast, as I have prov'd  
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at large, it remains now to set forth what relates to the Physician. The Physician ought to employ his greatest Sagacity and Industry in raising the depress'd Spirit of his Patient, by any means whatsoever; either by smoothing him with fair Words, or humouring him with agreeable Medicines, and pretending that such Med'cines are the only effectual and sovereign Means to cure him; or by preaching up the Excellency and sublime Nature of humane Mind, which can't endure that its starry Original should be depress'd by the Usurpation of the Senses, the Authors of a confus'd and tumultuous Life; or at last, if he be immers'd in the Domestick Cares of a Family and Children, or taken up in the Service of his Country, or plagu'd with Dignity, by advising him to retire to the Country, the chief Anodyne and Antidote of Care. In tending such Patients, the Physician must take care to deliver his Proposals and Precepts, with that Art and fearless Way of Speaking, that may dispose the Patient to Patience and Tranquility, and influence him to give a great deal of Credit to the Vertue of the Med'cines. I can scarce express what Influence the Physician's Words have upon the Patient's Life, and how much they sway the Fancy; for a Physician that has his Tongue well hung, and is Master of the Art of persuading, fastens, by the mere Force of Words, such a Vertue upon his Remedies, and raises the Faith and Hopes of the Patient to that Pitch, that sometimes he masters difficult Diseases with the silliest Remedies; which Physicians of greater Learning could not do with nobler Remedies, merely because they talk'd faintly, and with a soft dead Air. Hence it comes that different Physicians do not find the same Effects of the same Remedies;



dies ; for one knows admirably well how to screw up his Patient's Faith and Hopes, and another talks so faintly and ineffectually, that he never reaches his Patient's Imagination. All the World knows that Musick is of great Use in the Diseases of the Mind : Upon which Head I can't but take notice of a Passage of *Alexander ab Alexandro Dier. Genial. lib. 6. cap. 5. viz. Asclepiades made use of nothing more than the Musical Harmony and Consort of Voices in curing frenetical Persons, and such as were disorder'd in the Mind.*

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## C H A P. XV.

*An Exhortation to Physicians to find out and establish a Method of Cure, calculated in particular for their respective Countrymen: With some passing Hints upon the Nature of the Air of Rome, and the Cure of the Diseases in that City.*

### S E C T. I.

AS the Variety of Climates and Ways of Living, gives Rise to various Temperaments in Men ; so this Variety of Temperament diversifies in some Measure the Method of Cure ; without which Observation, an infinite Number of Errors would be committed in the Practice of Physick. Now, this being so obvious a Truth, I cannot but stand amaz'd, that the Physicians of respective Countries have hitherto been so negligent in investigating their Domestick Physick, or the Method of Cure, and the Med'cines that

that are peculiarly calculated for the Constitution of their Countrymen; as well as in writing the History of the Diseases they are frequently liable to. 'Tis strange, methinks, they should take their Measures without Distinction from some general Rules, and a Method of Cure, that perhaps is proper for those Countries in which the Authors of it live; but 'tis a great Question if 'tis equally proper for all. They compile compleat Histories of the Regions of the new World, and universal Natural Histories; but the History of the Climate and Country, to which they owe their Life and their Blood, they neither know nor seek after. We are apt to be taken with foreign and exotick Things, but what's Domestick, and the Product of our Native Country, is the Object of our Contempt. One and the same Diet, and the same Course of Remedies, will not answer all Countries; for the *Italians* who live soberly, and in a scorch'd Climate, must be manag'd one Way; The *French* another; and so on to the *Spaniards*, *English*, *Germans*, and others enjoying a peculiar Constitution of Air and Way of Living. We are inform'd by Eye-witnesses, that the Suture of wounded Tendons, the Operation of the *Bubonocele*, the Cure of the Ulcers, call'd *Chironia*, &c. succeed well in *France*: And, on the other hand, we find that such Operations are extreme dangerous at *Rome*, tho' perform'd by the Hands of the best Surgeons. Semi-tertian Fevers seldom turn malignant in other Countries; and yet at *Rome* they are, for the most part, malignant, or rather very dangerous; which was observ'd in ancient Times by *Galen*, when he liv'd at *Rome*.



## II.

In ancient Times, the Crisis's of acute Distempers were very regular and perfect; which is chiefly to be imputed to the remarkable Purity and Thinness of the *Græcian* Air and adjacent East; for that being endu'd with a very nimble elastick Spring, the Motions of the vital Humours, with which the Air is intermix'd, must likewise be very ready and quick; so that the Constancy of the Natural Laws impress'd upon 'em, can't be so easily disturb'd by the Opposition of any external Ambient. On the other hand, in an Air that's defil'd with watry and gross Impurities, such as that of the Northern Countries, and those situated near Lakes; the Humours of the humane Body being likewise tainted with Impurity, and their due Fermentations being, as 'twere confounded by the foul Influx of the Air, 'tis no wonder, that when these Humours are invaded by morbidick Particles, they can scarce ever reach a due Crisis or Despumation: For, as I said above, the Impurities of the Air impress'd upon 'em, are perpetually thwarting and disturbing their regular Motions. But the Purity of the Air was not the only Cause of the happy Crisis's of the *Græcians*, there being a great deal contributed to that Matter, by the admirable Prudence of the *Græcian* Physicians, who religiously observed the Motions of Nature, looking upon it as the true Directory and Guide for them to follow, in the Cure of any Distemper; nay, they never alter'd their Method of Cure, unless they were advis'd by some new Motions of Nature, what to do, and when, and in what manner to proceed. This was their standing Axiom;

Axiom ; That Nature is the Curer of Diseases ; and accordingly, they us'd but very few Remedies in acute Cases, least the regular Motion of the Disease, and the due Efforts of Nature, should happen to be disturb'd or oppos'd by improper Remedies. Now acute Diseases being treated thus in the beginning ; 'tis no strange thing, that when they came to the height, they went happily off in a regular and natural Crisis ; and that the Physicians should thereupon observe that Crisis's and critical Days are not Chimera's but certain Motions common to every Disease by a Physical Necessity, as being the means by which they compass the due Pitch of Solution and Maturation. The *Gracians* finding this Truth confirm'd by Experience, set forth and establish'd the Doctrine of Crisis's, with a great deal of Learning. But now that all things are in disorder in the Republick of Physick, this Doctrine of Crisis's is no longer reckon'd an Oracle of instructive Nature, but derided as an idle Fiction of the *Gracians* ; which occasions so many gross Mistakes in the Cure of Fevers, of which more hereafter, *Book II. of Crisis's.*

### III.

To illustrate this Matter with an Example ; I shall briefly set forth what daily Experience gives us to know concerning the Temperament of our Air, and our Method of Cure, in the City of *Rome*. The Air of *Rome* being now hemm'd in with seven Hills, is naturally moist and heavy ; for we are taught by Experience, that when one walks to some Distance out from among the Houses, he manifestly perceives a sort of Heaviness and Uncouthness of the Air. It abounds  
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chiefly with vitriolick and aluminous Salts, as it appears from the Plants that grow in it, the Vitriol and Alum Mines of the Country, and the Waters that wash the *Roman* Soil. 'Tis much infested with unwholsome Winds that blow from the South, South-West, and South-East. Sometimes 'tis so prodigious hot in Summer, that 'tis no Wonder the Dryness of the Soil and excessive Heat of the Sun occasion'd a Plague in the Consulship of *L. Val. Potitus* and *M. Manlius*, as *Livy* informs us, *Lib. 5*. From these, and other Reasons to be mentioned hereafter, the Inhabitants of this City are of a melancholy Temperament, a brownish (and some a palish) Colour, and a Habit of Body that's rather lean than fat. They are very liable to Disorders in the Head, and particularly to those Diseases which a heavy Air uses to produce, such as Disorders in the Lungs, malignant Fevers, Cachexies, Paleness of Countenance, Night-Mare, Consumption, and the like. Further, The *Roman* Air is likewise foul and unwholsome, not in all Places indeed, but those chiefly where Houses are wanting, and the Air is slow and unmov'd; and above all, in such Places as lie upon the *Tiberis*, or like Vallies are hedg'd in by Mountains, or are expos'd to the Exhalations that rise from old ruinous Walls, Vaults, and the Rubbish of the ancient Edifices. From whence it is manifest, that the Quarter of the *Circus Maximus* lying between the Palentine and Aventine Hills, and all that large Field that lies between the Aventine, the *Tiberis*, and the Ostian Gate, is downright unhealthful and pernicious. But to adjust the Matter all at once, all Places surrounded with a Frequency of Houses, standing high, with a Prospect to the North or East, and a considerable Distance from  
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the *Tiber*, are healthful. On the contrary, Places remote from many Houses, situated low, and in Vallies near to the *Tiberis*, and pointing to the South or West, are reckon'd less healthful; and in these very Places, which indeed is very wonderful, one Part of the Air is reckon'd in some Measure healthful, and another at a very small Distance is deem'd very pernicious.

## IV.

This Unwholesomeness of the City Air is foster'd in a great Measure by the adjacent *Latium* or *Campania di Roma*, which is surrounded with a Ridge of Mountains every Way excepting that Tract which runs out towards the Mediterranean, where it ends in a Plain. For the ancient *Latium* is now in a manner a Desert, and overrun with Impurities; 'tis openly expos'd to the South-Wind, and in several Parts of it, particularly about *Ostia* and *Porto*, the Air is observ'd to be very unhealthy, especially in the Summer time, insomuch that if any Citizen goes out and stays all Night in any of these Places, and then returns to Town, he is presently seiz'd with a malignant Fever, commonly call'd the Fever from the Change of the Air; which is a peculiar Sort of Fever, and very different both in its Symptoms and Method of Cure from other Fevers that spring from other Causes; for it being accompanied with the Signs of Coagulation, we find that blistering Plasters and alexipharmacal Med'cines are very beneficial in it; and Bleeding, on the other hand, is extreme pernicious. The Aliment that the *Roman* Soil affords, gives but very little Nourishment; so that it not only produces a great Quantity of



Excrements in the first Passages, but palls the very Mass of Blood, and renders it unfit for motion. From this Constitution of the Air and Humours, it comes to pass, that the Inhabitants of the City have no voracious Appetite; and even Foreigners, who in their own Country use to eat and drink liberally without indangering their Health, find, when they come to *Rome*, that the Keeness of their Appetite goes off by degrees, and that they lie under a Necessity of laying aside their wonted Intemperance, and taking up with the customary Sobriety of the Town, unless they mean to run the risque of incurable Evils. If the Inhabitants of the City dine heartily, they must eat a very slender Supper, not above seven Ounce Weight, and carefully abstain from all Meat at Night; for without that Caution they bring upon themselves remediless Crudities, and perverse Collections of Humours. Among other Things they ought to ply Exercise, especially in the Morning and at Night, those being the Seasons in which the Concoction of the Aliment is over, and the Separation of the pure and impure Parts is almost compleated; for Experience teaches us, that if they eat a hearty Dinner, and do not exercise their Body at Night, they are liable to a Heaviness of the Head, Weariness of the Limbs, Uneasiness about the Hypochondria, Crudities, unwonted Sadness, and the like. In fine, since the Air by reason of its innate Gravity, contributes but little to the Volatilization of the Humours, those who would eat heartily without Prejudice to their Health, must either follow a great deal of Exercise, or take care to have two or three Stools a Day; for we find by Experience, that those enjoy the best Mea-

Measure of Health, who are both temperate, and go readily to Stool every Day.

V.

So far for the Preservation of Health: We come now to give a short Account of what is particularly observ'd with reference to the Use of Remedies and Method of Cure in this City. The Inhabitants of *Rome* can't bear spirituous and very active Med'cines, such as volatile Salts, Spirits, and in general whatever is too aromatick or sharp. The use of such Med'cines occasions not only a painful Heaviness of the Head, with great Disorders upon the Nerves, but likewise a Destitution and burning Heat in the Viscera of the Abdomen, Costiveness, &c. Nevertheless, if such Remedies are call'd for by the Nature of any Distemper, we use to avoid the foregoing Inconveniencies, by qualifying them with diluting and unctuous Ingredients, and such as check their too forward Activity; for when thus qualified they do very good Service. In a Word, all spirituous Remedies, that are likewise indued with an Unctuousity, that is, your *Spirituoso-oleosa*, are the chief Remedies we use. In this City violent Emeticks are very much suspected, by reason of the grievous Symptoms they occasion; and the same Censure is pass'd upon strong Purgatives. Purgatives given in the Form of Pills, have no successful or plentiful Operation; but if they be given in a liquid Form and a moderate Dose, they do a great deal of Service. They cannot operate happily (especially if they are given in Pills or Bolus) unless you exhibit, when they begin to operate,



five or six Pints of thin Broth, or some Water that passes easily ; for diluting Ingredients join'd to Catharticks, not only forward the Purgation, but prevent all the Symptoms, that Purgatives given by themselves use to produce, namely, Thirst, Uneasiness and Distention in the Hypochondria, Squeamishness, subsequent Watchings, inward Heats, &c. This Use of diluting things, is reckon'd necessary in the Prescription, not only of Purgatives, but of all other Remedies in a dry Form, and of a spirituous Nature ; in order to prevent the Disorders of the Head and Nerves that frequently insue thereupon. 'Tis likewise a general Observation, that in the Cure of Diseases, especially such as are acute and come with great Force and Acrimony, diluting, emplastick and glutinous Med'cines are much the best ; such as Gelly of *Harts-horn*, Oil of *Sweet Almonds* new drawn, Emulsions of the Seeds and of *Almonds*, Syrup of *Violets*, the Cream and other Preparations of *Barley*, a Milk Diet, Bathing, &c. as also spirituous Remedies, when temper'd with oily and diluting Correctives : And on the other hand, that volatile sharp spirituous and aromatick Med'cines, or such as are very active, and over dissolving, are generally hurtful, tho' given in a small Quantity.

## VI.

But to wind up the Matter in a narrow Compass ; there's no sort of Remedies that affords so much Benefit to our Citizens, as Exercise and a prudent Repetition of gentle Purgatives. 'Twas with this View that the Learned *Petro-*  
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nius invented a purging Electuary call'd after him *Alexandrinum*, with which he did wonders in curing the Diseases of the *Romans*; and that same Author gave us, about a Century of Years ago, a noble Piece, *de victu Romanorum*, in which he carefully remarks the various Advantages and Disadvantages of the Air, Water and Aliment of this Climate; and then proposes several other very material things, relating to the Method of Cure and the Use of Remedies in the Diseases of the *Romans*. He asserts, from long Experience, that the Citizens of *Rome*, are troubled almost always with three principal Disorders, namely, a constant Heaviness of the Head, which he calls, *Capiplenium*, Costiveness and a Weariness of the Limbs: From all which we make a manifest Inference of the Gravity and Grossness of the Air, and the Laziness of the pall'd Humours occasion'd by too great an Accession of vitriolick and aluminous Parts. In curing Wounds and Ulcers at *Rome*, avoid all Ointments, for they frequently do harm; whereas good Success attends Balsamick Med'cines, vulnerary Decoctions, vulnerary Spirits, and others of that Nature, which facilitate the Cicatrization, by corroborating the injur'd Part, and restoring the lost Spring of the Fibres. Here Ulcers in the Feet are almost incurable; and even Wounds in the Feet are hard to be cur'd, especially if unguentaceous things are apply'd to 'em: But Wounds or Ulcers in the Head are easily cur'd. From these few Observations made in the Climate of *Rome*, Physicians will easily perceive what Course they ought to take in finding out and establishing a Method of Cure, calculated in a particular



Manner for the Natures of their respective Countries.

## VII.

I take it to be needless to insist further upon the Necessity of a domestick medicinal History ; for the Thing speaks its own Proof. And undoubtedly a great many Errors committed every Day with reference to the Manner of Diet, and the just Quantity and Use of Remedies, proceed only from the want of that History ; notwithstanding the slender Pretences of others, who impute the Causes of these Errors to remote Principles, or such as hold no Analogy with the produc'd Diseases. Experience itself vouches for the Power of Climates, in causing Diseases and changing the Constitutions of Men : For, generally speaking, the Natives of some Countries are frequently liable to such Diseases as are seldom or never known in other Countries. Accordingly we see the Scurvy reigns in the North, and the Disease call'd *Plica* in *Poland* ; the *English* are subject to the Rickets, and the *English* sweating Disease ; the *Egyptians* and *Syrians* to the *Elephantiasis*, and the *Romans* in the time of *Pliny*, to that wild Tetter call'd *Mentagra* ; upon the *Alps* the Inhabitants are subject to a *Bronchocele* or Swelling under the Throat, as the *Spaniards* are to scrophulous Tumours in the Glandules of the Neck. On the other hand, some Nations are seldom or never visited with some Distempers. A Quartan Fever is a Rarity in *Scotland*, and so is the Falling Sicknes in *Hungary* ; witness *Donnius*, Fol. 7. de rest. salub. Urb. Which question-

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less proceeds from the specifick Complexions of such Climates. Further, some Nations bear certain Remedies, that perhaps kill the Inhabitants of other Countries, Your *German* Physicians make great use of Emetick Remedies, and cry 'em up in all Diseases; perhaps, because they find 'em successful in their Country where the Winter lasts almost all the Year round, and the Natives are too liberal in gratifying their Appetite. For the same Reason the *Germans* bear with Ease the most active Chymical Med'cines, high Living, &c. which being tried at *Rome*, pursuant to the Prescriptions of the *Germans*, has prov'd pernicious; nay, not only the *Germans*, but the Physicians of other Countries boast of some general Remedies and Method of Diet, that gives great Relief to their Patients: Thus the *Spaniards* cry up Bleeding, the *English* glory in Opiats, the *Dutch* are always upon their Diaphoretick Med'cines, and so of the rest. And certainly they would not recommend the Use of such Remedies so earnestly, if they did not find them successful in curing the Diseases of their Country. But if they are us'd promiscuously upon all Constitutions, without examining the Nature and Qualities of respective Climates, as well as other Circumstances to be mention'd lower, 'tis no Wonder that they produce very different Effects in the Cure of Diseases. Perhaps it may come to pass from this Diversity of Climates, and of Ways of Living, that the Aphorisms and solid Precepts of *Hippocrates* are not always verify'd, but prove doubtful and inconstant upon the Experiment. And the same Judgment ought to be made of the Precepts and Cautions



of other Authors, if they should happen not to hold among our Patients: Not to mention the various and opposite Methods of Cure follow'd by Physicians, which frequently break the Constancy of such Precepts.

## VIII.

Since therefore, the Air, the Course of Life, and the various Nature of Food, in divers Countries, are almost entirely the Causes of Diseases; 'tis incumbent upon every Physician, in those respective Countries, to disclose, by the means of repeated and aged Observation, a Method of Cure particularly proper for their Countrymen, and such Topicks of Remedies as are either familiar or pernicious to them: And when they read foreign Authors, not to practise their Method, before they weigh it nicely in the Ballance with their own, and find it suitable to their own Observations. Further, I would likewise advise all Physicians when employed in the Cure of Diseases, to examine with Diligence and Maturity, the divers Seasons and Constitutions of the Weather, and the general Diseases that reign under such Influences of the Air; for 'tis apparent from the Observation of Learned Men, that every particular Disease owes something to the general Influence of the Air, and calculates its Periods and Manner of invading and affecting accordingly. In fine, as the Influence of such Seasons is various, so the Diseases that rage for the time, require a various Method of Cure, according to the Doctrine of repeated Observations.

## IX.

The chief Heads, upon which this History of every Country should run, are, the Air, the Nature of Waters, and the Situation of Places ; that is, it ought to take notice of the Rivers, Lakes and Springs ; of the Hills, Plains, and Mountains ; of the Situation of the Place towards the East, or West, or the other Points of the Heavens ; of the Animals that are chiefly bred in the Country ; of the Minerals, and other Products of the Earth. It ought to give a particular Account of the Customs and the Constitutions of the Inhabitants ; of the Diseases that are most common among them, and the Method of Cure that sets them free ; of their Domestick Remedies, or such as grow in their native Soil ; of the various and most remarkable Influence of the Seasons, and a thousand other things, by which the Seeds of Diseases are nourished or stifled. The Inhabitants of cold and moist Places are lubber-headed, fat and thick Lipp'd, and their Cheeks are protuberant. Some Countries produce very short Men, some tall Men, and some again produce Inhabitants with Swellings in their Throats. Some dispose their Inhabitants to a phthifick and raging Cough, as 'tis commonly observ'd in *Great Britain* ; some to the Plague and other Diseases. Besides, this Diversity of Countries makes no small Difference in the Temper and Manners of the Inhabitants, with reference to Timorousness and Courage, Pleasure and Pain, and the other Dispositions of the Mind, so that the Dispositions of the Mind would sometimes seem



seem to assume the Quality of corporeal Motion. Unless the Physicians of particular Countries take care to furnish themselves with all these Ingredients, they'll scarce be able to compass a perfect Cure for the Diseases of the Natives: with which View *Celsus* tells us, *In prefat lib. de Medi.* that the Course of Physick alters according to the Nature of Places; that *Rome* requires one sort of Practice, *Egypt* another, *France* a third, and so on.

*The End of the First Book.*



OF THE

*Practice of Physick*

BOOK II.

CHAP. I.

*By way of Introduction.*

SECT. I.



THE Design of this Performance, is to shew clearly the Importance of Observation in the way of Physick; and having for that end touch'd upon some general Causes, that have retarded the Progress of our Art,



Art, (the remaining Part of 'em will fall properly under the next Chapter) I now reckon it necessary to declare in this Book my Opinion of the Increase of Practice obtain'd by the means of History. If this my Opinion is agreeable to the Measures of Truth, I am proud of doing Mankind a Piece of Service; if not, I shall willingly stand corrected, and earnestly desire that others would do for the good of Mankind, what I was not able to perform. Now, considering, that a great many things concur to the forming of a System of any Disease, namely, the Causes, Signs, Phenomenon's, Indications, Remedies, &c. we shall speak of all these in order, beginning with the History of the Phenomena, in which the Nature of Diseases is really situated. To proceed more clearly in the Matter, I reckon it necessary to divide Physick into the first and second Species. By the first I understand a pure History of Diseases, obtain'd by sole Observation at the sick Man's Bed, and related by the Patients themselves. In order to compass this History, there's no Occasion for other Sciences, or the Reading of Books; for in regard it makes a Science, or Fund of Knowledge by itself, and depends upon Observation, and the Narratives of sick People, whatever Accession it receives from without must needs confound it, and render it uncertain; and from thence sprung the Errors I have so often hinted at. Upon this Head a Physician ought to act the Part of a Witness, that barely relates without passing any Judgment, and to set down distinctly the minutest Circumstances: For some of 'em are no sooner perceiv'd than they point to the right Method of Cure; and others

Others afford such Light as facilitates an Enquiry into the Nature of more difficult things ; so that Observations may justly be divided into the *Lucifera*, which affords an useful Light, and the *Fructifera*, which are attended with a real and immediate Fruit. In compiling therefore this History of Diseases, we must not fly off from the Coherence of things, and give our Minds a loose at every turn, as the Poets do ; but submit our Wit to the real Appearance of things, conquer Nature by Obedience ; and learn the peculiar Language in which it speaks. By the *Medicina Secunda*, or that Part of Physick which I call the Second, I understand all that falls within the Verge of Physick, over and above the first now explain'd. This indeed is improv'd by other Sciences, and requires the utmost Stretch of Knowledge, Method and Reason. Some may object against our Project of a certain and standing History of Diseases ; that some Diseases are the irregular Efforts of forlorn Nature, endeavouring to throw off the peccant Matter without any certain Order or Rule. But considering that an animated Body is a Complexion of animal, vital and natural Actions, laid concordantly together, and depending upon certain Principles subject to the Laws of Nature, that God has ordain'd ; when these Principles, come through Violence or Error, to depart from their Natural State, what Motions they put forth to retrieve their primitive State, will be such as are regulated by Nature. This is made out by Experience, not to mention other Topicks ; for we see that all Natural Things, particularly, Plants, Juices, Fruits, &c. have set Times of flourishing, ripening,



ripening, depurating, and putrifying ; we see likewise that all Diseases, especially those of an acute Form, have a certain Standard of Increase and Declension, and that a Physician cannot change this Course and stated Period of Diseases, by the exhibiting of Med'cines, without inflaming the Disease, or turning it into another that's yet more dangerous. Add to all this, that we find the Observations of our Ancestors, particularly of *Hippocrates*, are still agreeable to Truth, which could not be without a fix'd Course and Progress of Diseases. So that whoever is against this Doctrine, and cries out that Physick is an Imposture, must needs be an Impostor and a Cheat himself.

For a further Illustration of this History, it will be worth our while to keep to the ancient Division of Diseases into acute and chronical. The Ancients call'd these Diseases acute, which are seated chiefly in the Fluids, and depending upon their boundless Ebullition run speedily thro' their Period, and unless they are prudently manag'd terminate either in Death, or in tedious incurable Diseases. By chronical Diseases they meant such as proceed frequently from a Disorder in the solid Parts, or from a vicious Indigestedness and Grossness of the Fluids, so that they either move very slowly towards a Concoction, or else never reach it. Now the Nature of Remedies must be diversify'd according to the various State of the Blood in these Diseases. We ought not to ply every Patient promiscuously, either with spirituous or with watery Remedies, as many are wont to do. In acute Distempers, a great Part of the Cure depends upon the Physician's Patient  
waiting

waiting and acting with Judgment and Sagacity; and tho' such Diseases come frequently to a spontaneous Solution, either by Chance, or through the Favour of Nature, yet Physicians are not guilty of greater Errors in any Part of their Profession, than in the Cure of acute Cases. On the other hand, in chronical Diseases, retaining to the faint and decay'd Nature of the Solids and Fluids, the whole of the Cure depends upon the Skill of the Physician, and the Energy of Remedies; for neither Fortune nor Nature do much in such Cases.

But now, if any Gentleman of a nicer Taste should be disoblig'd by the mentioning of *Nature* so often in this Book, and brand it for a Refuge of Ignorance, I would have him to know, that by *Nature* I do not understand some wise Phantome, roaming about every where, and directing all Things by its Counsel; but a certain general Complex of natural Causes, which, tho' destitute of Counsel or Design, put forth their Effects in Pursuance of the Laws appointed by the Creator of the Universe; and that in such Order, as if they were govern'd and directed by the best concerted Counsels. I understand, if you will, the Æther from which all Motion springs, or a Complex of essential Accidents, namely, Motion, Figure, Magnitude, Situation, and the rest, upon which all corporeal Actions depend under the Direction of the Soul: This, I say, is that *Nature* I have so often Recourse to in this Treatise.



## C H A P. II.

*Setting forth some of the principal Causes that have hitherto retarded the History of Diseases, or the Medicina Prima.*

## S E C T. I.

**I** Intimated in the foregoing Chapter, that under the Title of *Medicina Prima*, I understood nothing else, but a most exact Description of the Phænomena of every Disease, which make up their due and natural History. But before I enter upon the Rules for compleating this History, 'twill not be improper to inquire by the Bye how it comes to pass, that Physicians have hitherto made little or no Progress in that Part; notwithstanding the large Volumes of Observations that are extant. In the first Place they were took off from a due Pursuit of Experience by that late Opinion of the Fallacy of the Senses, which insinuated, that an Inquisition into particular things is infinite and endless. But the Falsity of this Opinion is apparent when we consider, that all the Improvement of good Arts in this our Age, is owing only to the Senses and to Experience. Nay, which is much more wonderful, how many things do we owe to Chance? We all know that the greatest Part of Remedies, and several other things in the Physical Way came to light  
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by that means. And as for the other Inventions, the Enumeration of 'em would be too tedious. Did not Chance bring to light the Force of Gun-powder, the Conversion of the Load-stone to the Poles, and the Use of Telescopes? Now if Chance can do such mighty Feats, why should we be so scanty to the Senses that proceed in an orderly and regular Method, and tho' they sometimes err, yet see and correct their own Errors? Another Thing that stood in the Way of Experience, was, the ancient Hatred of the rational Sect against the Empirick, which they look'd upon as abject Mountebankry, unworthy of a Man of Letters; and indeed in so doing they had not done amiss, had they meant by *Empirick*, a stupid, errattick, unrepeatd Way of Experience, not fermented in the Intellect, and consequently producing nothing but erroneous Conceptions, and monstrous Opinions. But they carried the Matter too far in impeaching the *Empirick* Rational Sect, or the *Empirick* Sect become literate, invented by Method not Chance, improved and directed by the Understanding, and rais'd to the Pitch of Truth after a long Inquisition into the Effects of Diseases; which was always approved of by Men of Learning, as being consonant to Nature. In the third Place, we have made but little Progress in this sort of History, for want of a Guide either to direct us by his Example, or to light us into the Method of Experience through so many difficult and uncertain Passages, and so many Differences of Diseases. And tho' *Hippocrates* was the first that smell'd out this Matter, and publish'd it in his Writings, either Physicians

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have not observ'd it, or have put an unfavourable Gloss upon it, through their Prepossession and false Idols. 'Tis true, the rational Physicians consult Experience sometimes, but they only draw from it some general Heads, and those neither fully detected, nor maturely examin'd; and the rest they lay upon the Anvil of Thought, in order to work 'em into a Consonancy with their own Reason. The Empiricks again, tho' they always glory in Experience, never come to the right Use of it; for besides that they set about it without Light or Method, they can't bear that Tediousness of Inquisition, that's requisite in tracing the Effects of Diseases, and deducing practical Precepts from thence. 'Tis no Wonder therefore that this stupid, cloudy, and erroneous Way of experimenting, has given rise to that monstrous Practice of the Empiricks. Some contented with a few Experiments, and those of a narrow obscure Extent, raise thereupon a new Philosophy, and a new Theory of Physick; and if they meet with any thing that is not exactly consonant to their Advances, they have a strange Way of wresting it, and bringing it about to their Purpose. Such is the Philosophy of the Chymists, built upon a few Experiments taken from the Furnace, *Gilbertus's* Philosophy of Magnetism, *Mayow's* System of the *Aerous Nitre*; and, in fine, an infinite Number of Practical Systems founded upon the Doctrine of *Alkali's* and *Acids*, the *Triumvirat* of the Humours in the first Passages, &c.

II.

Many affect the Noise of Experience, but conclude upon their own Notions before they consult it, and then tye it up strangely to these Notions, and wind it about to serve their Turn. And according as the *Area* of their Fancy is clean, or possess'd by Prejudice, so they judge variously of their own and others Experiments, and either darken or enervate 'em with their own Meditations. Some giving their Mind to Astrology, Magick, and other superstitious Whims, that lie almost beyond our reach, have confounded the true Phænomena of Diseases with superstitious Traditions. Now, from all these there arose a threefold Offspring of Errors, or three false Systems of Physick, namely, the Sophistical, the Empirick, and the Superstitious.

Further; tho' Authors have amass'd together great and bulky Volumes of Observations, yet the first History of every Disease has been but little improv'd. For, 1. they observ'd no Method or Order in making their Observations, but acted like Men in the Dark, that grope at every thing till by Chance they light on the right Way; or like Men in a Desert, that take Counsel from a fortuitous Appearance of things; they drew their Observations in an interrupted and preposterous Way; so that 'tis no Wonder they borrow'd from thence, and imparted to us an uncertain Twilight rather than a constant and clear Light.



into the Effects of Diseases. 2. These Observations are like so many unsteady Waves of fleeting Experience, made upon three or four Cases, and not continued in a constant Order through Hundreds and Thousands of Patients, as the School of Coos did. 3. Tho' many of 'em have Observations, yet they are so confus'd and perplex'd with the Forms of Theory, that the clearest sighted Physicians can't distinguish, whether 'tis Nature, or the Author that speaks. 4. The Practice that some follow'd was more speculative and hypothetick, than calculated to Nature's Method. From whence 'tis credible, that Diseases went thro' their Periods, not by their natural and constant Laws, but according as they were variously treated in divers Courses of Practice; that is, the Progress, Exit and Symptoms of such Diseases were more owing to the respective Methods of Practice, than to the immutable and individual Nature of the Distemper. Thus, such as begin the Cure of the Pleurisy with Purgatives, or violent Diaphoreticks, (an unsafe and unlucky Method) ought to impute whatever Symptoms appear afterwards, rather to these Remedies, than to the genuine Nature of the Disease. We conclude therefore, that all Observations made upon Diseases irregularly cur'd, are of no Use for promoting their Natural History; for that they set forth the Case otherwise than it is in itself or ought to be. 5. The Prepossession of the Mind has likewise occasion'd the Omission of many Symptoms that did not exactly suit with the Author's Hypothesis, and the arbitrary Fiction of a great many, as being necessary for their  
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further Confirmation. So that a pure and exact History of Diseases, I mean such as flows from the very Nature of Things and is describ'd by the Patients themselves, is not to be met with in Books; upon the Account that the Discriptions of Diseases are for the most Part taken not from Observation and Matter of Fact, but from the Author's Brains; and that many Symptoms are ascrib'd to 'em, through the Licentiousness of Opinions, or the Negligence of Practitioners, that do not at all belong to 'em, as it appears from daily Experience: Nay, for a Proof, we need go no further than the Hypochondriack Illness alone, of which the Galenists have forged so many monstrous Things, to save and maintain their Hypothesis of a hot Liver and a cold Stomach.

III.

Those who reason of the History of Diseases, according to the Rules and Laws of such other Sciences as they take delight in, will never illustrate the Nature of Diseases by Observations; as I shew'd in the first Chapter of this Book. The famous Lord *Verulam*, among many others, laments extreamly the Injury done to Natural History in general, and the Increase of it, by *Plato's* inserting his Theology in the Course of his Philosophy, or Judging of Philosophical Matters by abstracted and theological Notions. And such indeed is the Case of Physick; for in the last Age Lo-



gick was so much in Vogue, that Physicians apply'd its stern and severe Rules to the History and Cure of Diseases; and how far they were out in so doing is plain from this, that after all the mighty Pains and Labour spent upon Physical Matters, they brought to Light, not new Discoveries or Hints pointing to 'em, but Questions out of Questions, and Fallacy out of Quibbles; and so put Physick intirely into the Hands of the Sophists. But as for Dialectick or Logick, tho' 'tis usefully apply'd to such Arts and civil Affairs as are grounded upon Opinion, yet it hardly reaches the Refin'dness and Subtilty of Nature, and in Natural History serves rather to confirm than to pull up Errors. Upon this Consideration, *Gregorius Nyssenus* breaks out to this Purpose. *All the World sees that the Dialectick Quirks are equally strong on either side, either for overturning Truth or refuting Error; by which means it comes to pass, that the Truth itself, when set forth by that Art, is generally suspected, as being tainted with that Subtilty that blinds our Eyes, and misleads us from the Truth.*

Tho' many Physical Authors have, for the abovemention'd Reasons, contributed but little to the Illustration and Improvement of the History of Diseases; yet in all Ages, and particularly in the two last, there have been some, who being either Men of excellent Sense and Judgment, or bred under good Masters, or acquainted with the Truth by reading *Hippocrates's* Writings, have made Observations to very good Purpose, and illustrated both the abovemention'd History and Practice itself, with practical Precepts confirm'd by long Ex-

perience.

perience. Such are *Duretus*, *Hollerius*, and *Jacotius*, *Ballonius*, *Tozzius*, *Martiannus*, *Sydenham*, *Septalius*, *Morton*, *Mangetus*, *Valescus de Taranta* *Tulpius*, *Nicolaus Chesnau*, *Franciscus Rubeus* of *Genoua*, *Riverius Moreus*, (an *Italian* Author of *Fevers*) *Iodocus Lomius*, *Valschmid*, and others of the like Form; whom I recommend as true Practitioners to be imitated by young Beginners.





## C H A P. III.

*Containing Rules for contriving and promoting the History of Diseases, and deducing from thence Practical Aphorisms.*

## S E C T. I.

THE Physical School that flourish'd at Coos, was ever in great Reputation among all sorts of Physicians: And indeed very justly. For whether you regard the Importance and Method of the Subject they treat of, or the Number of Inventions and Discoveries, you must own, that upon these Heads they went beyond all other Schools. That School brought up, among other great Men, Hippocrates, descended of the Family of the Asclepiades, being the 20th from Jupiter, the 18th from Æsculapius, and the 9th from King Chrysamis. This great Man following the Method of that School, was much given to Observation, diligent in delineating with Fidelity and Exactness the History of Diseases, and wise to a wonderful Degree in fixing practical Precepts, confirm'd by long Use. And I am of the Opinion that he kept so close to that preceptive aphoristical and grave Method in his Writings, for no other End, but to in-

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Inuate tacitly to us, 'that 'tis the most proper Method both for improving and confirming Physick. But considering that the Primitive Fathers of Physick have not plainly communicated to us the necessary Rules and Cautions for fixing such Precepts, nor left us that wide Field of Observations from whence they were took, methinks they have done by us as the Architects use to do in raising Obelisks, or building great Edifices; for when they are about them they have their Ladders, Scaffolds, Ropes, and many other Instruments of Architecture; but when the Work is finish'd they remove all these; from whence it comes to pass, that though Posterity admires the Magnificence of the Edifice, yet they are ignorant of the Instruments made Use of in building it. In like manner young Physicians admire and read with Veneration the Works of the divine *Hippocrates*, but stand amaz'd and are cover'd with Ignorance when they consider what Instruments he imploy'd in building so noble an Edifice. Now these Instruments I purpose to set forth (as well as I can) in the ensuing Chapters, by pointing to such means, as perhaps were made use of by *Hippocrates*, in promoting and perfecting Physick by Observations, History and Precepts.

## II.

In compiling the History of any Disease, four Things are chiefly necessary; First, an Acquisition of particular Observations. Secondly,



condly, the due Disposition of them. Thirdly, the Maturation and Digestion of these Observations. And, Fourthly, the Deduction of Precepts and general Axioms out of the Observations thus prepar'd. Of each of these apart. The infinite Inquisition and Description of Particulars, is the first Basis of the History of any Disease ; so that a Historiographer of this Nature ought to fall first about this, and to spend many Years in acquiring a large Number of Observations. In going about this Work, he must not trouble his Head with gratifying his Reader's Palate in fine Words, nor confine himself to what is useful to Patients ; but only heap together such a Quantity of Particulars, as is sufficient for a Deduction of Axioms, and fixing a clear and perfect natural Idea of the System of the Disease he treats of. Let his Observations be set down in a rough and unpolish'd Style, that is, in the same sort of Words that Patients use when they express their Ails : Let him set down the minutest, meanest and most useles Circumstances : Let him add nothing of his own, I mean, nothing that either a nimble Way of disputing, or an empty Shew of Learning may suggest ; but like a faithful Scribe, he must diligently collect the Laws enacted by Nature, and describe 'em in the same very manner in which Nature spoke 'em. He must regulate his Conduct, as Judges do in Civil Causes, upon which the best Sentences and Judgments are pass'd, when, without regard to the Licentiousness or Eloquence of Orators, all the Stress is laid upon the Witnesses : For in like manner, the Judgments pass'd upon the Nature of Diseases, will

will then be best, when they are taken from the evident joint Testimonies of Experience, not alter'd by the Licentiousness of Authors, who are sway'd by Humour and Prejudice; whereas the real Testimonies and Responses of Things, are, tho' sometimes obscure and perplex'd, yet always sincere and uncorrupted.

This rough and unpolish'd Way of Observations, join'd to the long Attendance that the Acquisition and taking of 'em requires, may perhaps scare both the Reader and the Writer, and seem equally troublesome and useless to both. But be it known to 'em, that a Collection of such Observations, is like a Barn or Store-house, in which we are not to stay with Pleasure, but to step down to it now and then, when we want any thing, either for the Construction of Axioms, or the Cure of Diseases. Nor has any Thing sunk the Verity and Fidelity of the Medicinal Natural History more than that fatal Itch of Authors to imbellish it with new and quaint Ways of Speaking, subtle Speculations, copious Quotations out of Authors, and such other Things as are added to gratify the Reader. It is expedient therefore to manage the History and Narrative of Cases, as if Physick were but just now come into the World; for that History of Diseases, that shines as it were through a Cloud in the modern Books, wants that Expurgation, that Sir Francis Bacon of old adjudg'd for Philosophy. *I am not ignorant, says he, that there is extant a natural History, the Variety and Diligence of which renders it both grateful and curious; but if you cull out of it the Fables, Antiquity, Quotations of Authors, idle Controversies,*  
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*Superstition, Philology, and other ornamental Appendages, which are fitter Materials for convivial Discourses, and the Entertainment of Learned Men, than for Institutions of Philosophy; If these be lopp'd off, the Remains of Natural History will come to little.*

To perfect the first History of any Disease, 'twill be necessary for the Historian to mark down in his Observations, not only the smallest Accidents that fall out from Day to Day in any Disease, together with their Violence, Progress and Termination for better or for worse; but likewise the minutest Circumstances of Time and Place, the Season of the Year, the antecedent and concomitant Causes, the Method of Cure, and the Remedies made use of: In a word, all Things that are either Antecedents, Concomitants, or Consequents of the Disease. For the Omission of the very least Circumstance uses to stop or perplex the Effect of the whole Observation, and even to interrupt the true Service of the History. All Things, I say, are to be describ'd with that Diligence and Nicety, that if any doubtful or uncertain Thing falls out in the Course of an Observation, it must not be conceal'd or suppress'd, (which indeed is too common a Fault among all the Writers of Observations) but ought to be plainly and distinctly describ'd under a Caution or Remark. For the Truth or Falsity of Experiments, will soon be laid open by the Truth or Falsity of the Axioms. Nay, further, that the Verity and Integrity of the Observation may be yet more apparent, the very Way and Manner of observing must be set down, that so Men may be

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left to their Liberty in judging and examining whether that Method of Observation is to be relied on or not, and others may be excited to find out more accurate Methods. To conclude, nothing will be more conducive to the perfecting of this History, than the Abundance and Fertility of the Collection of Particulars, for by that means the Inquisition and Construction of Axioms, will be gone about in a more easy and expedit Way, than upon a barren and undigested Stock.

### III.

After our Historian has spent a due Portion of Time in making Observations, and diligently survey'd the Nature of the Disease in hand, for several Years, and committed all to Writing; his next Care must be to attempt some Disposition of the Matter, and gradually Advance his Experience, which is yet but Empirical and Stupid, to a literate Degree. For such Observations are like the Letters of the Alphabet, useles indeed in themselves; but when variously joyn'd, mutually collated and rang'd in order, they make up the true Idiom of Nature. The Disposition I speak of, consists chiefly in sorting things of greater Importance into Heads and common Places, and ranging whatever is discover'd by Observation, under a proper Title. For Example, after the Historian has made a Thousand or two Thousand Observations of the Cholick, he divides that collective Body of Observations into Diagnosticks and Prognosticks, some constant, some in-

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constant ; Causes of several Classes, and of several different Influences : The Seasons of the Year, and the Constitutions of the Weather that prevails most for the time ; Symptoms, some constant Companions of the Disease, and others veering about and frequently disappearing ; the Events, some happy, some fatal, of the Indications taken, the Success or unfavourable Issue of Remedies exhibited. These, and such like, must be the Articles of *Inquisition*, as I call 'em, and after the History is collected, whatever is of a Piece with the Things rang'd under such and such Articles, must be plac'd accordingly ; that so the History being duly divided and distinguish'd, he may make an orderly and certain Induction for the establishing of Axioms or general Precepts.

## IV.

The Method of Digestion pretends only to make an orderly and digested Body of those Particulars which formerly lay straggling and unparcell'd ; to reject such Things as are false, and guard with proper Cautions any thing that's doubtful, inconstant, and common to other things that seem to resemble it. In the Diseases of the Breast, for instance, Diureticks are found to be generally the best Med'cines ; rejecting withal the acid Diureticks which gall the Lungs, and fix the Blood within 'em. The Jesuits Bark is truly an undeniable Remedy for the Cure of Intermitting Fevers ; but it must not be given if you suspect an Inflammation of any of the Viscera, or an inward Impolthume,  
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or a Debility and preternatural Disorder in any Part ; for in such Cases it does not remove but inflames the Fever, and by throwing the whole morbidick Matter upon the affected Part, produces fatal Inflammations, and at last a Gangrene. Further, the Jesuits Bark is of use in Intermitting Fevers, provided 'tis not given in the beginning while the Humours are yet crude ; for sometimes it does not take off the the Fever, or if it does, a few Days after the Fever returns ; nay, which is yet worse, oftentimes the Bark thus exhibited gives rise to new Distempers, namely, Asthma's, Dropsies, Dysenteries, Rheumatisms, Suppressions of wonted Evacuations, and the like, as we learn from the repeated Experience of our modern Practitioners. The *Jovial Bezoardick* is a sovereign Remedy for pacifying the violent Pains of the Parts, for it checks the Impetuosity of the raging Spirits and Salts in a Minute ; but in the mean time you must take care that these Pains are not gouty, venereal, or the like, the Matter of which being thereby imprison'd, might raise greater Evils ; you must likewise avoid the giving of it in the Disorders of the Nerves, and some grievous Diseases of the Head, such as the Apoplexy, Palsy, &c. for 'tis unfriendly and prejudicial to the Nerves and the Brain. Now the same Method must be follow'd in tacking due Cautions to Things of greater Importance in this our History, such as the Diagnosticks, the Prognosticks, the chief Symptoms, the Causes of any kind, &c. For an Induction run on by a single Enumeration, without joining due Cautions to doubtful things, and such as bear an Analogy to the Phænomena of

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another Disease, the Mask of which they sometimes put on; or without rejecting such Particulars as are false and inconstant; such an Induction, I say, makes a lame Conclusion. On the contrary, a laudable Induction, to use my Lord *Verulam's* Words, is a certain Form of Demonstration that defends Sense, illuminates and perfects the Mind in a just Deduction of Conclusions, and keeps close to, and mingles in a manner with Nature.

## V.

A sufficient Stock of Particulars being thus got in, our Observator must then call up his own Judgment, and begin to think of forming some general Precepts, comprehending the Sum and Quintessence of the Art. And indeed, if Apprehension and Thought be necessary in any Case, this must be it; that like a divine Fire it may enlighten this huge and obscure Desert of Particulars, perplex'd with such a fallacious Similitude of Things and Signs, an Intricacy and Intanglement of Causes, and an Ambiguity of Ways. This Illumination is necessary, that so we making a discreet Use of our Judgment, may mount upwards by Degrees, and climbing with constant Labour up the steep Ascents of morbi-fick Matters; one after another, may at last reach the top Height of Nature, where the Air is clear, and affords a true Prospect of Diseases, and from whence there leads an easy and gentle Descent to the Method of true Practice.

## VI. These

## VI.

These general Precepts, the Ancients call'd *Aphorisms*. Now, the *Aphorisms* are like Road-marks, and standing Beacons, to direct us in surmounting the difficult Cures of Diseases; which in ancient Times, were not meddled with, but by Men of the best Learning, worn out with Age and Practice, Men of pointed Thought in spying the subtilties of Differences, of Patience in doubting, Deliberation in asserting, and Prudence in making a just Disposition, &c. But now-a-days, the sorriest Apothecary's Boy claims a right of pronouncing Aphorisms and Sentences in Physical Matters. The Physicians take up the most general Propositions from Two or Three Experiments, made, as 'twere, at Random; to the too too manifest Detriment of the most noble Profession, and the Disgrace of the Professors. But for the Purpose.

When our Observator has labour'd sufficiently himself, in the wide extended Field of Observations, and learn'd exactly an Alphabet of the Nature of Diseases, he ought not to fly presently to the most general Things in a compendious precipitant way, a way that's unpassable to Nature, and expos'd to Disputes; but must rise gradually, by winding about, in ascending and descending, and by penetrating sufficiently into the Mass of Particulars; and when he has thus reach'd the most general Things, he must afterwards deduce from 'em middling Propositions and Axioms. That desultory way of abstracting from Particulars, not well known, nor duly examin'd, to Generals, some Affirmative, some Negative, is sufficiently exemplified in the Writings of later Authors. Upon a few Observations of Inflammations and Imposthumes in the Viscera of some that dy'd of malignant

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nant or inflammatory Fevers, *Henry Screta* had the Assurance to affirm, that all Fevers proceed from the latent Inflammations of the Parts: And having likewise derived the Origin of Hectick Fevers from the same Source, he still prescrib'd for these (as well as the other Fevers) Diaphoreticks and Aperients of several Sorts, with intent to dispel the pretended latent Inflammations and Imposthumes. Now, he's in the right of it, when Hectick Fevers take Rise from such Causes, but not when they spring from Causes of a quite different Nature, *viz.* over-sweating, a simple Gonorrhæa, the Whites in Women, over-suckling in Nurses, a *Dysentery*, a *Diarrhæa*, immoderate Salivation, over-watching, over-working, &c. In which Cases the *Hectick* is bred, not by latent Abscesses, as *Screta* fancies, but by too great a Consumption of the nutritious Juice; and the Method of Cure ought to be vary'd, in Pursuance of the Variety of such Causes. But 'tis needless to insist on further Instances of unseasonable Abstractions from Particulars, since they are so obvious in our Modern Books.

To make a standing and perpetual Axiom, you must take Care it be commensurable to the Particulars from which 'tis drawn; and runs neither higher nor lower, than the Importance, Verity, and Extent of the Particulars will allow; that is, that 'tis neither carry'd so high, as to end in abstracted empty Notions, nor confin'd to such a narrow low Compass, as to rest in the Confusion and Stupidity of Particulars. Let it be like Water which rises in the Fountain, as high as it falls upon the Descent from the Cistern. In Abstractions of this Nature, we must take Care, above all, that the Mind be directed by Prudence to have the Particulars always in View, and be not left to it self, as being apt in its own Nature to  
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soar to abstracted Things, without a mature Consideration of the interjacent Propositions. This Rule was religiously observ'd by *Hippocrates*, in his Aphorisms, his Predictions, his *Coacæ*, and most of his other Monuments; which ought to be a Pattern to us, in the forming of new Axioms. By this Time a Day, our Profession had been well stock'd with Axioms, if they had cleav'd to the Womb of Nature in the later Ages, and suck'd in the wholesome Milk of Observations; but being snatch'd from Nature's Lap, and bred up in the Schools of Disputes, 'tis no wonder we are now so scantily provided; and that all the advances made since the *Coans*, by the *Arabians*, and some illiterate contentious Men among the *Latins*, are only the idle Jargon of Old Men, address'd to unskilful Boys.

VII.

In fine, nothing contributes more to the Truth of Axioms, than an exact and rigid Description of all, even the meanest and almost useless Symptoms of Diseases: And indeed nothing has been a greater hindrance to the Perfection and Progress of the History of Diseases, than the preposterous Study of Physicians, in marking down and amplifying Things of a larger Extent, and neglecting obscure and mean Circumstances. Nature makes no Efforts in vain; and sometimes the least Things are the beginning or first Elements of the great one; not to mention that the least conduct us to the Knowledge of the greatest. Wind breaking downwards, is reckon'd a mean and immaterial Motion; and yet in a Dysentery, the breaking of Wind downwards, after its absence for some Time, is a sign of a speedy Recovery: In a desperate Iliack Fit, if a great deal of Wind breaks downwards with a Stink, 'tis a harbinger



of Death. This I observ'd upon a Man of Sixty Ysars of Age at *Rome*, in the Year 1693. If a Child handles its Belly often, 'tis a sign of Worms. If a thick Slime gathers upon the Teeth in Fevers, the Fever will be high, *Hip. Sect. 4. aph. 53.* Red-nos'd Persons are of a soluble Body; *Hip. Epidem.* Much Sweating, without a manifest Cause in the Time of Sleep, is an Argument of over Feeding; or if the Person do not eat much, it speaks that he wants Evacuations: *Hip. 4. Aph. 41.* A great many Things of this Nature, that appear in the Course of Cure, are over-look'd and slighted by Physicians, as being useless, and of no Importance; whereas they are in Effect as capable to give Light and Service, and afford Diagnosticks, Prognosticks, and Indications of Cure, as Circumstances of larger Extent, and greater Importance. *IV*

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## C H A P. IV.

*Of the Erecting of Colleges for the Improvement of Practice.*

### S E C T. I.

**T**HE Work we have thus cut out, is a Work of so much Labour and Meditation, that it requires not one, or a few, but a whole Society of Learned Men: And for this Reason I think it necessary, that in great Cities, which have large Hospitals, the respective Princes should settle Colleges of Physicians, in order to the improving of Practice by History and Observations. We see other Arts and Sciences flourish, by such liberal

Settlements, and 'tis convenient their Liberality should extend in like manner to Physick. Such a College of Physicians, or such a practical College, as I now propose, ought to be divided into Two Bodies, one set apart for reading the Books that contain Observations, and the other for making and setting down new Observations. As for the First, (which shall go by the Name of the *Literate Society*) they must have Recourse to such Authors as write, not Paradoxes, or uncommon and strange surprizing Stories, but the faithful and true Accounts of the Diseases that frequently happen, taking particular Notice of the Seasons of the Year, of the antecedent or occasional Causes of the Distemper; of its Rise, Progress, and Declension; of the Symptoms that appear from Day to Day; of the Translation of a Symptom of one Kind, into that of another, in every Period of the Disease: What Benefit or Detriment accrues to the Patient in any Period of the Disease, from the Accession, to any new Symptom, from the Exhibition of any Remedies, from the Pursuit of such and such a Method of Cure, &c. I mean whether Health or Death issued, whether the Disease was thereupon prolong'd, or shorten'd; or rather, whether 'twas transferr'd from one Species, to another of a very different Nature. Let every Fellow of this Literate Society, have one Disease allotted him, for the Task of his whole Life, which he ought to pursue after this Manner. If the Pleurisy, for Instance, be his Subject, let him read all the Histories of Pleurisies related by Observators, and other learned Physicians, and mark 'em down in a Paper Book, provided for the Purpose. After they are thus mark'd down, let him consider 'em with Attention, and then fall about the Investigation of the following Heads, viz. The Nature or Idea of the Disease in general, the



Diagnosticks, and Prognosticks, the Cautions and general Precepts, the most accurate Methods of Cure, the choicest and almost specifick Remedies, the mutual Transmutations of Symptoms and Diseases, with the measure of their Duration, the Efforts, Method and Order of Nature, in expelling the morbidick Matter. All these he must sort into their proper Classes, and range 'em under their respective general Heads, as I intimated above. By running thus through all the Histories of Pleurifies, he'll discover, *for Example*, that dry Pleurifies, without Spitting, are hard to be cur'd, and pernicious: That all Spittings which do not lessen the Pain, are bad; but those which give Ease, are of a good Character: That Pains in the Sides in old Men are, for the most Part, Mortal, chiefly because they have not Strength to discharge the Matter: That Purging in an acute Pleurisy, attended with an over-bearing Inflammation, stops the Spitting, feeds the Inflammation, and makes way for the Phthisick and Suppuration: That in all Diseases of the Breast, especially those accompanied with Inflammations, Purgatives are generally hurtful, and on the other Hand, Diureticks, expectorating Medicines, and the bathing of the Feet, give Relief: That repeated Bleeding, follow'd by several Draughts of a pectoral Decoction, taken down as hot as it can be bore, will quickly take off the most obstinate, and in a manner strangling Pleurifies: That a Looseness in a Pleurisy is generally fatal: That the pleuritick Pain rises, for the most Part, to the Throat, Breast, Back, &c. That Persons much subject to Pleurifies, dye oftentimes of a Pleurisy, or of a *Peripneumonia*: That the sooner the Spitting comes, the sooner the Pleurisy's cur'd: That in a malignant Pleurisy, the safest way is not to Bleed: That cold Drink kills many Pleuritick Patients, though

though at the same Time Physicians ascribe their Death to other Occasions. These, and an Infinity of other Positions, will our Historian gather from such Histories; which, though they lye straggling and undigested, yet they contain something that relishes of the natural Oar, and answers nicely to its Laws.

I mention and recommend this Method of illustrating and amplifying the History of Diseases, by Observations cull'd out of Books, lest such a quantity of Ware taken from Nature's Shop, should lye more or less bury'd, in Proportion to the Solidity or Levity of those Authors, and for fear the elaborate Performances of Men of the best Learning, should be doom'd to perpetual Oblivion. Besides, one Man is not sufficient for illustrating the whole Province of one Disease; so that we lye under a Necessity of taking in Materials from all Hands. This *Galen* hints at; *Cap. 9. de Subfigur. Emp.* Since, says he, *the Life of one Man is not sufficient for the Invention of all Things, History collects the Observations of aged Time, that by the Instruction of many Men in several Ages, one Man may become very Learned.*

## II.

The other Body of this College, to which we shall give the Name of the *Practical Society*, must be entirely taken up in finding out, and marking down new Observations of Diseases, and pursue the same Measures in that Office, that we laid down above, for the Literate Society in theirs. That is to say, every Member of the Society must take a particular Disease for his Province. I have shewn at large in the foregoing Chapter, how the History of Diseases is to be made, by Observations taken at the Patient's Bed-side; and in what



manner Aphorisms and general Precepts are to be deduc'd from thence. But to set the Matter in a clearer Light, I shall here recapitulate what I pursued there at more Length. In regard the History of Diseases consists in their Symptoms and Phenomena for the Time, an Historian ought to display his utmost Efforts, in setting forth the very least and meanest of 'em, just as they are in themselves, or are related by the Sick Person. How far Authors have hitherto been faulty upon this Head, is evident from their Writings; for in treating of any Disease, they consulted Books, and their own Fancy, without any regard to Experience, and the Book of Nature; from whence it comes to pass, that the Symptoms they ascrib'd to Diseases, are either not met with in Practice, or found to be of a quite different Form from what they are represented to be. In the Second Place, our Historian ought to enquire, and after long Enquiry, determine what Symptoms are constant, and, as 'twere, the perpetual Diagnosticks of the Disease allotted him; and these he must distinguish from the other fortuitous and common Symptoms, and such as retain rather to a different Method of Cure, and an almost infinite Combination of Causes, than to the Nature of the Disease.

3. He ought to remark the Nature, Violence, Progress and Issue of the Symptoms, and take Notice what Transmutations of Symptoms happen thro' all the Periods of the Disease. 4. He ought to observe the Temper, the Degree of Violence, the Progress and the Exit of the Distemper it self, and its Change for better or worse, upon the arrival or retreat of any Symptom. 5. He ought to mind what Symptoms disappear, or what Increase upon the Exhibition of any Remedy, or the using any Method of Cure in every Period of the Disease. The same Remark is to be made upon the

the principal Disease, after the Exhibition of Remedies, or applying a Method of Cure. 6. He must set down what Symptoms accompany the Disease to the last, with the Degree of their Violence in every Period; what Symptoms take leave of it in a short Time, and when; and what Alterations are made in the Disease, upon their disappearing or returning. 7. He ought to carry the Inquisition of all these Things, through Hundreds and Thousands of Patients; that so he may rest altogether assur'd of the Truth of the Matter, and readily form general Axioms; and the Art of Physick, like a lively and thriving Plant, standing upon its own Roots, may grow, and be confirm'd: At the same Time that our Historian is employ'd in marking down the Phenomena of Diseases, he ought likewise to bend his Thoughts upon the giving of separate and particular Histories of the Causes, Diagnosticks, solid Indications, or Method of Cure, specifick Remedies, and such other Things as relate to the Essence of the Disease, of which more anon. Now, these ought to be the chief Topicks or Articles of Inquisition in the new Performances, calculated for amplifying the History of Diseases, by a distinct Account of their Phenomena, and the other Particulars above-mention'd. 'Tis needless to repeat how lazy the Physicians, especially of this Age, have been in that Matter. Methinks the ancient Fable of *Scylla* would suit well with their Systems of Physick; for the Ancients feign'd that *Scylla* had the Countenance and Breast of a handsome Virgin, but barking Monsters about her Belly. And in like manner, many of our Modern Systems look plausible and specious, nay, and promise great Things upon the first View, and the outward Appearance; but when you come to their Womb, or their Parts of Generation, they neither  
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bring forth the Fruit of Practice, nor afford new Light for the finding of that Fruit, but cram us with noisy snarling Questions, with horrid Monsters of Opinions, and the nauseous Repetition of former Inventions. In a word, Experience must be our Rule. Experience gave Being to our Art; and Example, led the way, according to *Manilius*. In the way of Physick, Experience is of more Weight than Reason; and Reason, on the other Hand, has more Weight than Authority: So that the Case of Physick is different from that of Civil Affairs, in which the Authority and Acts of the Senate are more regarded, than the greatest Weight of Reason.

### III.

Before I dismiss this Subject, it will be proper to subjoin a few Hints of the Laws of this College: And these I would not have to be much different from those of other learned Societies, especially as to the general Statutes. As for the particular Rules, let this one be minded above all, that every Fellow of the *literate*, as well as the *practical* Society, should have but one Disease allotted him for the whole Course of his Life; for such is the Importance and Necessity of the Subject, that it cannot well be otherwise. For considering that a long process of Time is spent in collecting a Store-house of Particulars, and disposing and digesting it in the above-mention'd Manner; and that a large Stock of Meditation, Sedulity, Judgment, and Patience, is requir'd in going about it; 'tis evident, that the Life of one Man is scarce sufficient for the perfect Illustration of one Disease. So that if one were to undertake the Discussion of several Diseases, the narrowness of his Time can't but oblige him to be guilty of the scandalous Crime of making precarious  
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and uselefs Transcripts out of other Authors, of inventing several Things at Pleasure, of heaping up bulky Volumes, that make an ostentative Show, but do not improve the Art; the Tire-someness of the tedious Inquisition, would make him slip into the Errors I have so often censur'd in our Ancestors. For this Reason, I think the *Egyptians* did well, in allotting to every Physician the Cure of one particular Disease.

The Fellows of this College are to meet at set Times, at least once a Month; and are to lay their Observations before the Censors. Now the Censors ought to be the Senior and more Learned Fellows, qualify'd with a mature Judgment, and aged Practice. They must be empower'd to correct, whatever is contrary to the Laws and Method of the History. As for the other Particulars, relating to the Splendor and Dignity of the College and of Practice, let these be adjusted by the Learned Fellows, that meet from Time to Time.

## C H A P. V.

*Containing a Solution of the Arguments that may be offer'd to the contrary.*

### S E C T. I.

**A**Mong the many Objections that may be offer'd in Opposition to this our History of Diseases, this is the chief: Diseases are certain confus'd, unsteddy, and disorderly Effects and Motions of forlorn Nature, when puzzled how to defend it self; so that 'tis a vain Labour, to pretend  
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to make a regular and standing History of 'em. The Argument sounds well, indeed, but it does not stand to Experience: For we see that *Hippocrates* has pursu'd that Enterprize, to his infinite Glory; and why may not others make the same Essay? Besides, daily Experience is Evidence, that Diseases observe an equal and individual Constancy in their Motions and Periods, and keep to certain Rules in their Progress and Maturation: That as all these Things take Rise from a specifick and peculiar Exaltation, or Specification (if I may so speak) of the peccant Humour, so such Specifications must have certain and individual ways of Invasion and Maturation, with concomitant Symptoms, that are altogether different from the ways of Invasion and Maturation, and the concomitant humoral Exaltations in other Diseases. And these Specifications of the Humours in some Diseases are so constant, that let the Disease be seated where it will, and assume what Face it will, 'tis always manifested, by certain inseparable Characters, peculiar to its Specification. To illustrate the Matter with an Example.

## II.

That Specification, or peculiar Nature of the Humours, that produces a Tertian Intermitting Fever, differs vastly from the Specifick Quality of Humours, that gives Rise to Hysterick Fits, the Pox, and the other Diseases. By virtue of the Morbifick Specification of the Tertian Humour, a Tertian Fever is known to observe the following Course, both in Ancient and Modern Times. It begins with a Shivering and Vomiting, and burns with a biting Heat: The particular Fit is over in the Space of Twelve Hours; and the entire Body of the Disease disappears after Seven Rounds, provided the Physician is not out in his Method. Pur-  
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gation and Bleeding is prejudicial in the Beginning. The particular Fits terminate, for the most part, in Sweating. The Disease will not bear febrifugous Medicines, till after the Fourteenth Day : The Urine is very red and brick-colour'd, (that particular Colour being an almost Pathognomonick Sign of this, and the other intermitting Fevers) and so on. Now that I am speaking of this Urine, I must observe by the bye, what repeated Observation has taught me, that the Diseases accompanied with that Urine, proceed (if not all, at least most of 'em) from the specifick Source of intermitting Fevers. In Confirmation of this Remark, I have oftentimes experienc'd, that some Periodick Pains, and other Diseases, exasperated at set Times, were accompanied with a very high-colour'd, or brick-colour'd Urine, as if they had been the Offspring of Periodick Fevers ; and were happily cur'd, after a fruitless Trial of other Remedies, by attenuating, bitter, and antifebrile Medicines, prudently administer'd ; that is, seasonably, and in Conjunction with diuretick or purgative Ingredients, as we are wont to do in intermitting Fevers. What we have said of the Specification of a Tertian Humour, may be apply'd to all other Diseases. The Hysterical Illness (for instance) is produc'd by a specifick peculiar Exaltation of the Humours, and accordingly is cur'd by such Remedies as are calculated for it in a peculiar manner. It invades the Patient with Symptoms, that retain oftner to it than to any other Disease ; namely, a Sense of strangling, Passions of the Heart, an Oppression of the Senses ; Convulsive Motions, both of the *Abdomen*, and the other Parts of the Body ; a Sense of Cold in the Crown of the Head, (the greatest Diagnostick of Hysterick Cases) and a Chillness in the extrem Parts.



The above-mention'd Symptoms appear, when the hysterick Humour ranges here and there, and is not yet settled; but if it happens to fix in any one Part, it produces Diseases and Symptoms peculiar to that Part. Thus, if it fixes in the Head, it assumes the Form of an Apoplexy, or a Head-ach, or other Disorders of the Head; if it seizes the Nervous System, it appears in Convulsive Motions: If it fixes in the Heart, Palpitations and Anguish ensue; if in the Lungs, a Cough, Asthma, and the like, are the Consequence: If the Gut Colon is affected, it resembles a most obstinate Cholick; if the Kidneys or Loins are the Seat of its Residence, it humours nephritick Pains exactly; if the Bladder, you have a Suppression of Urine; if the Ventricle or Intestines, it produces a Vomiting and Looseness; and so on. So that if a Physician be not very sharp-sighted, and well vers'd in his Business, if he is not aware that the specifick Cause of one Disease oftentimes personates that of another that's quite different; he'll take the foregoing Diseases to proceed from Causes peculiar to themselves, or to the Part affected, and will labour in vain in the Prescription of vulgar Remedies, to the great Detriment of the Patient; whereas, in Effect, they depend immediately upon the hysterick Spring, and, after a fruitless Use of other Remedies, are cur'd in a Minute, with nothing but Antihystericks. The same may be said of the Pox, and such other Capital Diseases; of which more at large in the Chapter of Causes.

### III.

Further; Diseases are so constant and orderly in their Motions, that they observe a regular Course, not only in the Invasion and Progress, but likewise in the Declension and Exit. Accordingly,

dingly, we see some Morbifick Causes perform their Maturation and Depuration in the Space of a few Hours, others in so many Days, others in a determin'd Number of Months, and others again in so many Years : And sometimes, when Nature is strong, they terminate of their own accord, without the Assistance of Physick. Not only *Hippocrates*, but Experience is Evidence, that an exquisite Tertian, if left to it self, will terminate in Fourteen Days ; for so much Time does the Specification of the Tertian Humour require to compass a Depuration ; and, prescribe what Remedies you will, to extirpate a Tertian before that set Time, they are all ineffectual. As for the Objection, that a Tertian may be stiff'd in the Bud, by the Use of the *Febrifuga* ; I own, that sometimes it happens so ; but then, the Disease either breaks out again with greater Fury, after a few Days, or puts into its Place several grievous Distempers, such as Asthma's, Dropsies, slow Fevers, Phthisicks, &c. But of this more anon. For the same Reason, Purgation and Bleeding is pernicious in the Beginning of intermitting Fevers ; for daily Experience is Witness, that upon the Use of these Remedies, the Fever is either duplicated, or inflam'd. 'Tis true, it falls out very often, that exquisite Tertians go beyond Fourteen Days, and extend even to Months ; that a Pleurisy lasts after the Seventh, or Fourteenth Day, and so of the rest ; but that must be attributed either to a contrary Method of Cure, namely, when we disturb the Course of Nature, and the gradual Separation of the peccant Humour, by Bleeding, and exhibiting Purgatives and violent Diaphoreticks in the Beginning ; in which Case, the Specification of the Tertian Humour is sunk, and a new Specification arises, with a new Train of Symptoms, and a new Vicissitude of Periods, which



which lasts till the Separation of the impure Humour is perform'd by the set Laws of Nature, or till we light on a Remedy that directly extinguishes that Species, upon which Head the Doctrine of Specifick Remedies is grounded : It must be imputed, I say, either to this irregular Method of Cure, or to new and predominant Constitutions of the Air, or to some flaming Irregularity in the Conduct of Life, or else to other violent Causes, that are able to disturb the regular Motion and Specification of the Tertian Humour, and put it by the due Term of Maturation.

## IV.

What is said of the Tertian Fevers, must be apply'd to all other Diseases, particularly those of an acute Form ; in which the abovemention'd Maturation, and Separation of the peccant Humours, are more manifest, than in others that approach to the Chronical Class. In the Business of Maturation, the Conduct of Nature is much the same, as in the Production and Maturation of Plants, Animals, and other Things ; for in both these Offices, it moves in a certain, constant, and immutable Order ; unless it be put out of its Byass by violent Causes, which, by that means, give Rise to Monsters, and abortive Productions. And as Animals, Plants, &c. undergo their specifick and peculiar Mutations in a constant Order ; as they grow and flourish, some in *May*, some in *July*, and so on ; as they bring forth Seed in regular Order, and at last fade away ; so Diseases, by virtue of the specifick and peculiar Exaltation of the Humours, do, all of 'em, observe their respective Periods, and carry along with them their peculiar Symptoms. Thus, the Pleurisy is accompany'd with Five constant Signs ;  
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the Dropsy, and other Diseases, are attended by their peculiar Symptoms, pursuant to the Observations not only of our Age, but of the earliest Times of Antiquity. We must not therefore despair of obtaining an exact and standing History of Diseases, by reason of the foregoing Objection ; for 'tis fairly prov'd, that Nature, in all her Concerns, proceeds in a grave, constant, and perpetual Order : And if, by the Violence of Causes, it be jostled out of its Road, it flies out into Monsters, abortive Productions, and manifest Errors ; but these happen but seldom.

V.

It may be further objected, that 'twill be a hard Matter to compass this History, both by reason of an infinite Number of Causes and Circumstances that concur to the Production of Diseases, and upon the Account of the various Methods with which they are cur'd. As for the Causes and concurring Circumstances, they will not be always so confus'd and irregular, but that, after long Observation, we may trace the true Motions, Progress and Exit of Diseases : For had such a Confusion of Causes prevail'd in all Cases, *Hippocrates* his *Aphorisms*, *Predictions*, *Coacæ*, &c. could never have been form'd. As to the Second Obstacle, namely, the various Methods of Cure ; 'tis certain, that by virtue of Method, Diseases assume various Faces, and call up various Symptoms ; but then these are secondary and accessory Symptoms, and common to other Diseases, but not the fix'd and characteristical Symptoms ; or if they are, it happens but very seldom. For take what Method you will, in the Cure of a Pleurisy, for instance, you will scarce put aside the pricking Pain in the Side, the Difficulty of

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Breathing, the hard Pulse, the Cough, and the other Characteristicks of a Pleurisy ; or, if you knock off some of 'em, assuredly you'll never sink 'em all. But to prevent Mistakes in the way of Method, and the going upon false Indications, so as to turn Diseases to another Course, than what they really and naturally require ; I recommend to you the reading of such Authors, who having dwelt perpetually with Nature, and trac'd the Complexion and Cure of Diseases with more Diligence than Noise, have laid down a solid, unshaken, and perpetual Method of Cure : Such are, among the *Grecians*, *Hippocrates*, *Cælius Aurelianus*, *Ætius*, *Aretæus* ; and *Galen*, provided he be kept clear of the Fumes of Speculation : Among the *Latins*, *Celsus*, and the other Authors mention'd above, *Cap. 2.* So that, upon the whole, this Objection ought not to scare us from attempting the propos'd History of Diseases.

## VI.

I conclude with this *Inuendo*, That the Dissection of the Corpse of those who die of Diseases, affords great Light for discovering the occult Causes of Diseases, as well as perfecting and amplifying the History now propos'd. But these Corpses are not to be dissected transiently, and in a Hurry, as many are wont to do. Before you commence the Dissection, you ought to take a Description of the Disease of which he dy'd, marking down the occasional Cause of the Distemper, the Train of Symptoms, with their Progress and Upshot ; the Motions of the Disease, the attempted Method of Cure, the Operation of the Remedies, and the other Particulars mention'd in the foregoing Paragraphs. When these are once learn'd, you are then to go about the Dissection,

on, and enquire into the Seat and Cause of the Disease, that is, whether the Fluids or Solids were faulty in producing the Distemper, where the morbid Matter sculk'd, and what Complexion 'twas of, what degree of Injury the Solid Parts have sustain'd, whether they are flabby or bent, obstructed or open, affected with Convulsions, or otherwise; whether their Disorder is communicated to other remoter Parts, and the like. It must be own'd that several chronical and obscure Diseases, can scarce be set in a clear Light without Dissection; and the History of such Cases will never be perfect and entire, unless the Particulars I mention'd but now, be mark'd down before the Dissection: For to dissect Corpse transiently, without a previous Knowledge of the History of the Disease, is of no manner of Use for illustrating either the Ætiology or Pathology of Diseases. But of this more at large in our Treatise, *De fibra motice & morbosa*.

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C H A P. VI.

*A Specimen of the History of Diseases, containing a Description of the Gout, and its practical Aphorisms.*

S E C T. I.

**T**H E foregoing Advances, relating to the manner of forming the first History of Diseases, and deducing practical Aphorisms from thence, can't be set in a clearer Light, than by giving some Historical Specimen of one certain Disease, as a Pattern for all the rest; and in regard

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gard it is a common Complaint, that the Gout kills more of the Rich and Wise, than of the Poor and Simple, we shall make a short Essay upon that Disease, and freely communicate what Observation has taught us upon that Head, being countenanced in this Undertaking, by the excellent Dr. Sydenham, whose Method we follow.

## II.

The Gout is a painful Disorder of the Joints, that attacks chiefly old Persons, who after spending the better Part of their Life in Softness and Effeminacy, and giving themselves up to Idleness, Surfeiting, Venery, and an indiscreet Use of Wine and spirituous Liquors, discontinue their wonted Exercise, as their Years advance, and lead a lazy unactive Life. Sometimes it seizes upon young Men, and those of a thin slender Constitution, but that happens very seldom, and is owing chiefly to Hereditary Contagion, to intemperate and early Venery, to the discontinuing of wonted Exercise, to over-eating, to an indiscreet Use of Wine, or other spirituous Liquors, follow'd all on a sudden by refrigerating and moistning Drinks, to the spoiling of the first Concoction by severe Study, or by Care and Fretfulness. Those who are subject to the Gout, have large Sculls, with a salacious and robust Constitution, and a habit of Body, that, for the most Part, is full and moist. It is not so severe upon old Men, as upon those of a middling or younger Age. Children, Eunuchs and Women, are seldom or never seiz'd with the Gout. Commonly a general Paroxysm returns about the Equinoxes and Solstices, and above all about the beginning of *February* or *March*. Errors of Diet, the Passions of the Mind, and violent Causes, will call up a latent Fit; and as this

Fit appears suddenly, without any previous Signs to usher it in, so it is quickly over, especially upon the Removal of the above-mention'd Causes. Some Weeks or Days before the Invasion of the general Paroxysm, the Patient is seiz'd gradually with want of Concoction and Crudity in the Stomach, a Heaviness and windy sort of Intumescence all over the Body; all which increase every Day, 'till the Fit appears.

### III.

Now the Paroxysm proceeds in the following Order. A few Days before the Invasion, a sort of Drowsiness, and a descent of Wind, with a sort of spasmodick Disorder, is felt in the Muscles of the Thighs. The Day before the Accession, the Appetite is voracious in a preternatural Way. Though the Patient goes well and sound to Bed, yet about Midnight he's awak'd by a Pain, that's seated for the most Part in the great Toe, and sometimes in the Heel, Ankle, or Calf of the Legs: Soon after, a shivering, shaking, and feverish Symptoms appear, and undergo a gradual Remission; but the Pain increases gradually, 'till it reaches the highest Degree of Violence, about Sun rise, and variously affects the little Bones of the *Tarsus* and *Metatarsus*, with a Sense, as 'twere, of a Dog gnawing, sometimes of a Pressure and squeezing, and sometimes of the tearing and dilaceration of the Ligaments. The Pain that the Patient feels upon his first waking, resembles that which issues upon the disjointing of these Bones, with a Sense, as 'twere, of cold Water thrown upon the Part affected. The Part affected is so very sensible of Pain, that it can't bear the very Weight of the Sheets, or walking slowly through the Room, the whole Night continues Restless;

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the Body and affected Part, are constantly toss'd up and down the Bed, through the Impatience of Pain, which begins to abate about an Hour or Two after Sun rise, sooner or later, according to the Quantity and Grossness of the peccant Matter: At which Time the Patient falling into a gentle Sweat, drops asleep, and when he wakes, finds a Swelling upon the Part, and the Pain abated. Before the Accession of the Fit, there's no great Swelling upon the Part, but only a protuberancy of the adjacent Veins, by which all the assaults of the Fit are usher'd in; for this is a characteristick Sign, as 'twere, of the approaching Paroxysm, as any one may observe.

## IV.

For the Two or Three Days next ensuing, the Pain is very violent, especially towards the Evening, and abates a little after Midnight; but if the Gouty Matter is very copious, the Pain continues for several Days. A few Days after that, the other Foot is seiz'd with the same Pain, and that to a degree of Violence and Duration, proportional to that in the first. Thus do the Feet use to be affected successively one after another; but if the peccant Matter be very copious, both Feet are seiz'd at once, and that with equal Violence. The first Fits of the Gout use to answer to one another, both in Duration, and manner of Invasion; but after the Gout has seiz'd with Violence upon both the Feet, the ensuing Paroxysms observe no mutual Proportion. However, this is always observable, that they grow higher in the Night-time, and abate in the Morning. In the Gout, we have an universal Paroxysm, and particular Paroxysms that make up the Universal. The particular ones return every Day (as I intimated

mated above,) towards the Evening, and after trying the Sick Man's Patience all Night, begin gradually to abate towards the Morning. In these particular Fits, I have sometimes observ'd, that the posterior are at once milder and shorter, than those which came first, and continue thus to grow gentler and gentler, 'till the Gouty Matter is consum'd, and the Patient restor'd to perfect Health. The Period of the several Paroxysms varies, pursuant to the variety of Ages, Constitutions, external concurring Causes, and the like. But oftentimes it takes the following Course. If it attacks a Man in the Flower of his Age, and one that's seldom subject to the Gout, it spends it self in Fourteen Days; but when it seizes upon old Men, and those who are often Gouty, it continues for Two Months. When it falls upon those who are almost worn out with Age, or a long Continuance of the Gout, it seldom parts with 'em 'till near *Midsummer*.

V.

The Urine of Gouty Persons is high colour'd for the first Fourteen Days, and drops a Red Sand, like Sediment; nay, the Patient does not void by Urine above a Third Part of the Liquids he takes in, the rest being kept in the Body. The Belly in like manner is Costive in the Beginning, and the Appetite flat. Towards Evening, a Shivering over-runs the whole Body, and during the Paroxysm, every Joint almost is affected with a Heaviness and Uneasiness. When the Paroxysm retires, the affected Part is seiz'd with a violent Itching, in the form of a Scurf, which falls off, as if the Foot were scal'd. When the Disease is over, Appetite, Sleep, a due Laxity, and the other Marks of perfect Health, return by Degrees.



## VI.

Such is the Progress of the Gout, when it observes a regular Course. But oftentimes it happens, either through an improper Method of Cure, or by reason of the obstinate Continuance of the Distemper, which transforms, as 'twere, the Substance of the Body into the Disease; it happens, I say, that this regular Progress of the Gout, and its Symptoms, is almost perverted, and the Gout is vastly different from it self, both as to its Symptoms, and the manner of Invasion, and Nature is not able to throw it off after the wonted Manner. If the Gout leaves the Feet, which are the chief Residence of the Gouty Matter, or attacks other Parts as well as them, 'tis a Sign, either that an erroneous Method of Cure has been followed, or that the vigor of the Body is decay'd, while the source of the Gout is considerably reinforc'd, in which Case it invades likewise the other Parts; namely, the Hands, Elbows, Knees, and the other Parts of the Body, both Internal and External. In proceeding thus irregularly, it throws its Matter upon the Fingers, and gradually swells 'em up, and after it has sufficiently fill'd their Joints, then the Fingers are weath'd like a Parsnip, and begin to lose their Motion, and at last hard stony Concretions appear in the outer Surface of the Joints, which in process of Time, do by their Acrimony eat through the Skin, and Cuticle of the Joints, and at last appear in the form of Chalky Concretions, or round Balls of Hartshorn. Nor does it only infest the Joints of the Fingers, but even that of the Elbow, upon which it uses to raise a whitish Tumor, to the Bigness of a Hen-Egg, which is frequently inflam'd, or very Red. When it falls upon the Articulation of the Thigh,

it

it causes such an uneasy Sensation, as if a huge Weight were hung upon the Thigh, but without violent Pain ; but when it descends from thence to the Knee, it carries along with it a most dismal Pain, and almost takes away the Motion of the Joint, so that the Patients lie unmoveable, as if they were nail'd down ; or if they offer to move, they undergo an unspeakable Torture, with a disquieting Uneasiness all over the Body, that's familiar to this Disease beyond others.

## VII.

If a regular *Podagra*, that appears towards the end of Winter, and finishes the general Parox-ism in Two or Three Months ; this *Podagra*, I say, if it assumes an irregular Course, and takes deep Root in the Body, it afflicts the Patient for the whole Year, abating for Two or Three Months in Summer, and the particular Fits do not observe a natural Succession or Termination, in the space of Twenty Four Hours, as before ; but make a Period of Fourteen Days, more or less, during which Time they torture the Part afflicted to a miserable and constant Degree, especially if the Feet or the Knees are affected. In this long Duration of the Paroxisins, the Joints begin to be contracted, and grow unfit for Motion, and though the Patient makes a shift to walk through the Room with a Stick, or People to support him, yet he does it with great Pain and Difficulty. When the Disease is at this Pass, it oftentimes so falls out, that the Patient having made his Feet firm and stronger, by thus walking up and down the Room, so that they are not so ready to receive the Gouty Defluxion ; the Gouty Matter that us'd to repair to the Feet, not being sufficiently evacuated by other Passages, recoils to the internal  
Viscera,



Viscera, and there frequently produces mortal Stagnations. In the mean Time, the Patient is subject to divers Symptoms, which, like the living Off-spring of a long continued Gout, is always hanging upon his Shoulders ; namely, a Pain or Swelling of the *Hæmorrhoids*, a weariness in the Limbs, great Inappetency for the first Days of the particular Fit, and the Crudities thereafter, with a *nidorous* Belching, and the Food, as 'twere, putrify'd in the Stomach, especially if he has eat heartily, or fed upon Meat that is not easily digested ; but all along the Appetite is in some Measure flat, the Back, and other Parts, are affected with a troublesome Itching, especially at Night : The Urine that formerly was scanty, and high colour'd, is in this State of the Disease, discolour'd, and copious ; nay, both in Colour and Quantity, it resembles that voided in a *Diabetes*.

### VIII.

When the Disease is at the aforesaid Pass, the Patient waking out of his Sleep in the Morning, has a Sense of a violent Compression, and squeezing of the Ligaments of the Bones of the *Metatarsus*. Sometimes when he's asleep, he wakes all on a sudden with a yelling, through a sense of Pain, as if the *Metatarsus* were broke with a Club. In the mean Time, the Tendons of the Muscles that support the Legs, are seiz'd with a violent and painful Cramp, that surpasses all Patience. When the Disease has gone to the greatest Heighth of Duration and Violence, and the Patient grows old, the ensuing Paroxisms are not so painful and insufferable ; partly, because Nature is not able to throw out the Morbifick Matter upon the Joints, so that it tarries in the *Viscera* ; and partly upon the account that the continued Defluëtion  
of

of Matter has render'd the fleshy and membranaceous Fibres of the affected Part, almost insensible and obstructed. For this Reason, the room of the Pain is supply'd with a lassitude of the Limbs, a pain in the Belly, and sometimes a *Diarrhæa*; and when these Symptoms appear, the Pains of the Joints are mitigated; but when the Symptoms retire, the Pains revive, and attack sometimes one, and sometimes another Part, fatiguing the Patience of the Sick Man, without respite; so that it may be call'd a Paroxysm, not only of the Gout, but of Anger, Sorrow, Fear, and other grievous Passions of the Mind; for the long Sickness does so enervate the Mind, that the least Motion disorders it, and makes it sink almost into Despondency. The above-mention'd mutual commutation of the Articular Pains, and the Disorders of the *Abdomen*, is familiar with other Distempers besides the Gout, as I've intimated frequently above; so that the Disorders of the Joints are happily redress'd by such Medicines as move the Belly; and the Diseases of the Belly are successfully cur'd, with the Remedies that throw the Humours out to the Skin; such being the Means pointed out by Nature her self. I have oftentimes observ'd, that when the Gouty Matter vanishes or retires all on a sudden, the Patient is seiz'd with violent Pains in the Stomach, and bilious Vomitings, and after that with the Jaundice, which is speedily dispell'd with Three or Four Doses of *Rhubarb*. When the Gout makes the first Invasion, it creates grievous Pains, but as the Patient's Years advance, and the Disease grows old, the Pains become gentler, though at the same Time their room is supply'd with that numerous Retinue of Evils that I mention'd but now. Though the Pains are very violent in the first Years of its standing, yet some Amends is made



made for that Violence, by the long Intermiffion of the Paroxifms, and the recovery of perfect Health, which does not take Place when the Dif-eafe is grown in Years, and the Patient bends under Old Age. At laft the Gouty Perfon is feiz'd with the Stone in the Kidneys, and voids great quantities of Sand by Urine, whether it be that lying upon the Back, or the diforderly Secretions of the *Viscera*, and other Parts, or an analogy of the Gouty Matter, with that of the Stone, have given Rife to that Dif-eafe. In this Cafe, the Gout and the Stone fucceed one another by Turns, and by a viciffitude of Paroxifms, make a perpetual Fund of Pain and Anxiety to the Patient. But fometimes the Gout produces not only the Stone and Sand, but likewise other Diforders of the Bladder, particularly a Suppreffion of Urine, a Difficulty of Urine, an itching of the *Scrotum*, a piffing of Blood, and the like: And if the Gouty Matter be very copious, it caufes a long Inappetency, a pale Countenance, fwellings of the Feet, a tough Slime upon the Tongue, with a bitter, and fometimes a falt Tafte, and many other Symptoms, in proportion to the diverfity of the Parts, and the Patient's Indifcretion in uſing the Six not-natural Things, and regulating the Conduct of Life.

IX.

'Twould be too tedious a Task for this Place, to run over that long winded Series of Symptoms obſerv'd in Patients of various Ages, Conſtitutions, ways of Living, &c. which make a neceſſary Part of a compleat Hiſtory of the Gout. For here I deſign only to propoſe a very ſhort Specimen of the *Hiſtoria Prima*, that young Beginners may learn from thence the Method of gathering the firſt Elements of Dif-eaſes, and that with  
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the same Simplicity and Truth, that accompanies 'em from the Mouth of the Patient. And whoever considers this Model of History, will find I have kept close to the Rules and Method laid down above, and have observ'd a rigid Severity, both in observing, and describing. But, to make an End of it : Women are seldom troubled with the Gout ; or, if they are, they are either Masculine Virago's, or stricken in Years, or subject to Rheumatisms, and especially the Hysterick Illness, the Source of which Disease uses to give rise to articular Pains. Children and Youths are seldom seized with it, unless they be begot by Parents that were extream gouty ; in which Case, they have slight Paroxysms sometimes in their tender Years. When the Blood of gouty Persons, thro' the long continued Disorder of the *Viscera*, and the defective Secretion of the Excrements, and other Causes mention'd before, is reduc'd to the last Degree of Impurity, and as 'twere Feculency, Death approaches, and by virtue of a Fever, or some other Disease rais'd by the gouty Matter, carries off the Patient.

X.

*Hippocrates, Lib. de Humor.* towards the End, acquaints us, That the Accellion of a Pain in the Joints, appeas'd a Pain in the Right Side of the Colon ; and, after the articular Disease was cur'd, the Pain of the Intestine reviv'd. This is an Argument of the great mutual Sympathy between the Intestines and the Circumference of the Body, mention'd so often in this Treatise. 'Tis likewise an Argument of that Sympathy between the Intestines and the Urinary Vessels, that *Hippocrates* took notice of in these Words, *Colerici, facti Dyssuriosi, omnes judicabantur.* A great many are trou-



troubled with the Cholick, before the Invasion of the Gouty Paroxysm; and upon the disappearing of the Cholick, the Gout presently shews its Head: Which is still a further Confirmation of the above-mention'd Consent between the Glandules of the Skin, and those of the Intestines. *Those*, says *Hippocrates*, (Lib. de Judicat.) *who are long ill of a Looseness, accompany'd with a Cough, are not cur'd, till their Feet are seiz'd with violent Pains.* But there's not only a mutual Sympathy and Transmutation between the Diseases of the Skin and those of the Intestines, but likewise a remarkable Consent between the Breast and the Privities, the Breast and the Legs, and so on. *A violent Pain*, says *Hippocrates*, (Lib. 2. Epidem. §. 5.) *falling upon the Testicles, takes off a dry Cough.* And again, Lib. 2. Epidem. §. 1. *If an Inflammation of the Testicles is follow'd by a Cough, the Inflammation will go off; and so upon the Reverse.* Again, Lib. 2. Præ sag. 67. *When a Testicle swells upon a Cough, it calls up the Memory of the Society of the Breast, Dugs, Privities, and the Organs of the Voice.* Once more; Lib. 2. Prognostic. *All Imposthumes in the Legs, after violent and dangerous Disorders in the Lungs, are useful.* A Dropfy in the Testicles discuss'd, and ill cur'd, was follow'd by a Dropfy of the Breast. *Mear. Hist. Med.* If an Ulcer in one's Leg dries up, and thereupon a Pain rises in the Breast and Side, opposite to the affected Leg, 'tis mortal: *Hip. de Morb. Pop.* Lib. 4. A Spitting of Blood ensued upon the Curing of an Ulcer in the Feet and Legs: *Rhod. Obs. Cent. 2. Obs. 94.* An inveterate Ulcer in the Left Leg being heal'd up by an Empirick, a Pleurisy ensued some Months after in the Left Side, of which the Patient dy'd; and during the Pleurisy, he spit such Matter, as us'd to run at the Ulcer: *Hildan. Observ. Med. Chirurg. Cent. 3. Obs. 39.* Anno 1691,

1691, I saw a Man die in an *Italian* Hospital, upon the Curing of a spreading Sore in his Foot. From all which, that intimate Sympathy between the Breast, the Legs and the Privities, is more than manifest. But this by the bye.

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*An Article of Practical Aphorisms,  
drawn from the first History of the  
Gout.*

S E C T. I.

**M**Y chief View in giving this short and plain Narrative of the Accidents, or *Historia Prima* of the Gout, was to show my Readers the Course they are to steer, in enriching the History of the other Diseases, and even of the Gout it self, by new Observations, which are always capable of Multiplication. It remains now, to propose some general Precepts, or practical Aphorisms, which are deduc'd from the first History of the Gout, by repeated Observations made upon Patients of all Ages, Temperaments, and Ways of Living; and which conduct us directly to the Diagnosticks, and Prognosticks, and Cure of Diseases. To begin. Those who feed upon Barley-Bread, are seldom troubled with the Gout, or Pains in the Joints. While the Gouty Pain is upon you, abstain from a liberal Application of Anodyne and Emollient Medicines; for an indiscreet Use of these, breeds first stony Concretions in the Joints, and then Contractions of the Parts. There's a wonderful and almost occult Sympathy, between the Joints and the Intestines; for the

4 Diseases



Diseases of those Parts undergo a mutual Commutation : Whence *Hippocrates, Lib. de Humoribus*, says, *A Pain in the right Side of the Colon, was appear'd by the Appearance of a Pain upon the Joints.* And again, *6. Epidem. 4. 3.* *One having a Pain in the Joints, was troubled at the same Time with a Pain on the right Side of his Intestines ; but when the Pain of the Intestines was cur'd, the articular Pain grew worse than before.* Gouty Persons do not die of the Gout, but because the Gout does not fall down upon the Joints. Before the Appearance of the Gout, and sometimes after 'tis cur'd, an Oedomatous Swelling uses to fall upon the Feet ; the Cause of which retains to the Source of the Gouty Matter, which Nature, by Laws known to it self alone, and by a regular Crisis, throws out upon the Feet, in the Form of an Oedomatous Tumour. Now, in these Tumours of the Feet, whether before or after the Gout, be sure you make use of no Remedy, whether external, or internal, to turn off that Matter from the Feet ; for I have oftentimes observ'd, that upon the exhibiting of Purgatives, Diureticks, or Sudorificks, that Matter has retir'd from the Feet to the inner Parts, and produc'd Apoplexies, Asthma's, Fevers, or sudden Death. Nay, this you may infallibly expect, if you apply the external Repercussives, commonly us'd in such Cases. Wherefore, we must religiously stand off from these external Topicks, and not oppose the Course of Nature, which throws out (as 'twere by a Crisis) the nocive Matter upon the Feet. In such Gouty Tumours of the Feet, 'tis conducive to leave all to Nature it self, to take care of the first Concoction, and to mind Diet and Exercise : For I have oftentimes observ'd, both at *Rome* and elsewhere, that the above-mention'd Swellings disappear'd by these Means.

## II.

*Sennertus, in Praxi Tract. de Arthrit. Cap. 4.* reckons up an innumerable Train of Evils, ensuing upon the insufficient Defluxion of the Gouty Matter to the Joints ; to whom I refer the Reader. A Dysentery cures the Gout ; and all Evacuations by Stool, are beneficial in that Disease : *Hipp. 2. Proret.* The Gout begins always in the great Toe. Sometimes the Arthritick Illness, and the Cholick, undergo a mutual Transmutation : Sometimes it degenerates to a Dropsy, and an *Anasarca*. Before the Invasion of the gouty Paroxysm, the Patient urines, sweats, and spits but scantily ; he is seiz'd with an Inappetency, and a Sort of Weariness ; and the Veins of the Part upon which the Gout is coming, are a little swell'd and distended. *Varices*, or Dilatations of the Veins, appearing in the Time of the gouty Pain, prognosticate Relief. Old Persons, and those who are recovering of Chronical Diseases, are apt to have the Gout, when thro' Errors of the Use of the Six not Natural Things, they sink the Concoction of the *Viscera*. A violent Fit of Anger uses to bring a severer Fit of the Gout, than what it is at other Times. Those who tread often upon Grapes, or bath their Feet in Stum, are seldom troubled with the Gout. Violent Exercise after Eating, disposes to the Diseases of the Joints, and inflames them, if they took Place before. Tho' the Gout is troublesome in any Age, it gives most Trouble to Old Men, and to those who give way to Luxury and Sloth, and humour their Appetite too much. Children are not troubled with the Gout, before the Use of Venery : *Hipp. Sect. 6. Aphor. 30.* Eunuchs are neither gouty, nor bald ; *Hipp. Sect. 6. Aphor. 28.* Pains in the Joints do



the same Service to Old Age, that Cuticular Eruptions do to Children, and Hemorrhages to young Men ; for the Gout frees Old Men from heavy Distempers, to which they are subject if the Gout does not come : And the same may be said of some Constitutions, that are apt to be gouty. Persons of a weak Stomach, that's apt to breed Crudities, are not cur'd of the Gout, till the Stomach is put to rights. Purgatives, and violent Diaphoreticks, do not do so well with arthritick Persons. As far as I could gather from diligent Observation, an exact and regular Use of the Six not Natural Things, and Stomachick Medicines, are all in all in arthritick and gouty Cases. If the gouty Paroxysms us'd to be inflam'd about the *Equinoxes* and *Solstices*, you ought to pursue some preservative Courses before these Seasons, either by a Regulation of Diet, or by exhibiting gentle Laxatives ; for by this means, you'll either quite stifle the imminent Excursion, or oblige it to come with a milder Force. Wine, Venery, and Idleness, bring the Gout ; but the drinking of Water, Milk, and Exercise, cure it. In arthritick Cases, some have receiv'd wonderful Benefit from Issues. Those who are liable to the Gout, ought to go to Bed betimes, especially in the Winter ; for sitting up a-Nights, and perplexing of the Mind, injures the Concoction, and furnishes Plenty of Matter for the Gout to feed upon. But I have already deliver'd several general Precepts of this Disease in the First Book, to which I refer the Reader.

C H A P. VII.

*A Monitory Schedule of such Things as are wanting in our Profession.*

S E C T. I.

**M**Y Design in this Performance, is only to exhort Physicians, to treat of those Things that are of greater Importance, and have been either neglected by others as useles, or avoided as difficult and insuperable. With which View, I shall now briefly lay down the Series of those weighty Things that are still wanting in our Art, to which the Readers may add what further Particulars come into their Minds.

We want therefore,

A Diagnostick, Prognostick, and Curative History of such Diseases and Symptoms, as proceed from the Disorder of the solid Parts.

A Diagnostick, Prognostick, and Curative History of the Diseases that spring from a Disorder in the Fluids.

A History of Diseases, as they are produc'd by divers Causes, or by other principal Diseases.

A Diagnostick, Prognostick, and Curative History of the Urines and Excrements retaining to every Disease.

A History, Diagnostick, Prognostick, &c. of the Condition of the Tongue, as well as the Changes and Disorders that happen upon the Skin, Eyes, and other Senses, in any Disease.



A History, Diagnostick, Prognostick, &c. of the Diseases, and their concomitant Symptoms, that retain to the Emotions of the Mind.

A History of the ready Diagnosticks of Diseases, and their difficult Symptoms.

A History, Diagnostick, Prognostick, &c. of every Disease, with Reference to the Variety of Ages, Sexes, Circumstances, and the various Ways of Living, especially a few Days before the Invasion; a History of Diseases produc'd by the Suppression of Evacuations; and so on.

A History, Diagnostick, Prognostick, &c. of the Benefit or Detriment accruing to the principal Parts; namely, the Heart, Breast, Head, Nerves, &c. from some Capital Remedies frequently made use of in the Cure of most Diseases, such as Bleeding, Purgatives, Sudorifics, &c.

A History of Cautions and Precepts, relating to the Service or Disservice, and the Method of prescribing every particular Remedy; of Cautions and Precepts, touching the Effects that ensue upon the Conjunction and Mixture of Remedies.

The History of the Invasion, Progress, Cure and Upshot of such Diseases, and their Symptoms, as are more familiar and severe in certain Seasons of the Year, and observe a Periodick Course, if I may so speak.

An Historical Series of such Diseases as are truly Acute, or really Chronical, or in effect incurable; incurable, I mean thro' a default in the solid Parts, and the impossibility of the thing, not from the disorder of the Fluid, or the Ignorance of the Physician.

A History of all the Accidents that are wont to be observ'd particularly in every Disease about the time of Death.

A History of the Causes that always, or for the most part, produce such and such particular Distempers, and not others.

A History

A History of the Diseases in which the Sick retain a clear use of their Senses and Reason to the last gasp, and those in which both Sense and Reason is sunk for several Days before they Expire.

An Exhortation to Physicians, to be always employ'd in marking down the History and Cure of Diseases, depending upon the new and general Influences of the Air, and the antecedent Weather.

An Exhortation to all Physicians, to describe a Natural History of their respective Countries ; I mean the Constitution of the Inhabitants, their Endemial Diseases, the particular Method of Cure calculated for them, the Domestick Remedies, and the other Particulars peculiar to the Country.

An Exhortation to Physicians, to find out new Methods for curing those Diseases that are commonly call'd Incurable.

An Exhortation to find out new means to guard off old Age.

A History of the Diseases of the Nose, Eyes, Ears, Ventricle, Liver, Nerves, and other the more principal Parts. These I take to be the Principal Things that are still wanting for the Improvement of Practice. If any one can think of other Heads, especially with reference to the other Parts of Physick, I hope he will not disdain to make an addition of 'em to this Sketch.



## C H A P. VIII.

*Of the Diagnosticks of Diseases; and the Springs from which they flow.*

## S E C T. I.

**A**S Lawyers adjust Rights from Matter of Fact, so in our way, a right understanding of the Disease, discovers all the Topicks of Cures. In the Cure of such Diseases as admit of any Delay, I proceed after this Manner. The first Day I spend in examining the Patient strictly about the occasional Causes, and all the antecedent and present Circumstances of the Disease. During that Time I prescribe no Remedies, for fear an unseasonable Prescription should perplex the ordinary Period of the Disease, and sink the Constancy of the Signs, and represent the Disease otherwise than it really is: At least if I prescribe any Thing, I take Care that 'tis some general innocent Medicine, which may serve at the same Time, to unfold the nature of the Disease, by Observations made upon the Benefit or Injury that accrues from it. The Second Day, having maturely weigh'd the foregoing Circumstances, I fix upon the Species of the Disease, and so commence the Prescription of the proper Remedies. So that the Truth of the Matter lies here: The first Foundation of Cure, is a just Apprehension of the Disease, and a due Distinction between it, and others of the like Form; for the first Threads or Elements of Diseases, lye immers'd in thick Darkness, and all the Prowess of Art can't reach the Cure, without the Direction of a solid *Diagnosis*.

## II.

The only *Grecian* after *Hippocrates*, that made any solid Improvement of the Practice of Physick, was *Cælius Aurelianus*, that glorious Head and Defender of the methodick Sect, who laid so much Stress upon the Necessity of Signs in the Cure of Diseases, that he seems to have had nothing in View so earnestly, as the Detection of the Signs and Circumstances that make the Partition Walls of Diseases. And the learned World agrees, that upon this Head he has gone beyond all other Authors, both *Grecian* and *Roman*; for his Works are nothing else but an useful Seminary of Diagnostick Signs and weighty Precepts. Nay, if you take a narrow View of some of his Titles, you'll see that through the whole Series of such or such a Chapter, he confines himself entirely to an exact Description of the Signs of Diseases, without so much as touching upon the other Heads. In others again he insists only on a faithful and natural History of the respective Disease; which no other Author since *Hippocrates*, has ever given us, excepting *Dr. Sydenham*, who seems to have taken his Method of treating and describing Diseases from *Aurelianus*. Though the methodick Sect was almost wrapp'd up in Silence for several successive Ages, after the establishing of the Rational Sect by *Galen*; yet in this our Age, it begins to revive; for the Coagulation and Dissolution of the Fluids, the Tension and Flaccidity of the Solids, to which the Moderns attribute the Origin of all Diseases, is exactly of a Piece with the *Strictum* and *Laxum* of the Methodicks; and the Practice of the best Physicians now in *Italy*, is grounded on the Hypothesis of Stricture and Laxity, mechanically explain'd; for the Understanding of which,



you ought to read the Writings of those learned Physicians of *Naples, Rome and Pisa*, who have solidly recall'd Physick to the mechanical Standard.

### III.

The Necessity of Diagnostick Signs, is apparent with a Witness to those, who being called to cure Diseases, that either are complicated, or proceed in an obscure Method, or bear a Similitude to other Diseases, are presently at a Stand, and after racking their Mind, find themselves wide of the Truth they thought they had discover'd, and curing one Disease instead of another, multiply the List of incurable Diseases *in infinitum*. But all these Clouds are speedily dispell'd, if they light on a good Author, that by long Use has learn'd the true Diagnosticks of Diseases, or a ready Distinction of difficult Diseases, and candidly imparts it to his Readers. The Whites in Women (for Instance) and a Clap, are accompany'd with Signs so like, that all Physicians almost are deceiv'd in discerning the one from the other, especially when bashful Women cover their Whoredom with the Pretence of the Whites. To prevent such Inconveniencies for the future, I'll give an infallible Sign for distinguishing the one from the other: Ask the good Woman if the White Flux continues upon her, when her Terms come down; if she says it does, you may tell her roundly she's Clapp'd. But if the Whites vanish during the Menstruation, and return again, when the menstrual Flux is over, assure your self, 'tis nothing but the simple Whites. To give another Example or Two: The principal Signs of a dead *Fetus* in the Womb, given in by Authors, are  
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the Coldness of the Woman's Share-bone, a cadaverous stinking Breath, the rolling of the *Fætus* from one Side to the other, and the like. Now, these do oftentimes impose upon Physicians, and therefore *Cælius Aurelianus Cap. de fæt. Mort.* assists us with an infallible Sign, *viz.* If the Big-belly'd Woman be troubled with a *Tenesmus* and a violent Inclination to go to Stool, in conjunction with the Symptoms last mention'd. I was witness of the certainty of this sign once at *Padua*, and another time at *Rome*. The Signs of a Dropsy in the Breast are very obscure and uncertain; but if the Patient is troubled with a difficulty of Breathing that falls heaviest upon him in his Sleep, insomuch that after a few hours Sleep, he wakes all on a sudden with a sense of Suffocation, opens the Windows and greedily sucks in the open Air; this, I say, you may take for a certain and infallible sign of a Dropsy in the Breast; for you'll find that the Patients Legs will swell, and the other less constant Symptoms will accrue. In fine, the progress of the Disease, and dissection of the Corps of such as die with this Symptom upon 'em, will convince all that disbelieve it. There's no part, the disorders of which are more intangled one with another, and confounded by reason of obscure Signs, than the Lungs; insomuch, that oftentimes Practitioners take one Disease for t'other. But above all, the greatest Mistakes relate to a *Tuberculum* or hard Swelling in the Lungs; of which *Hippocrates, Lib. de Med.* says, 'Tis a very artful thing to find out and dissolve the Tubercula of the Lungs, or to prevent their gathering. And *Dr. Willis, Cap. de Vomic. Pulmon.* speaking of the *Tuberculum*, says, This disorder lies at first so close and bidden that it affords no signs to betray it. The same is the Opinion of *Tulpius*, and the other learned Practitioners, who

despair



despair in a manner of finding Pathognomick and Infallible Signs of this Disease, and particularly upon this Consideration, that a morbidick adherence of the Lungs to the Ribs, is attended with the same sort of Symptoms. But after all, so far as I can learn by Observation, the more constant signs are as follows. The Patient being otherwise well, begins to breathe with difficulty ; this difficulty increases by degrees ; he does not snort when he breathes, neither does he spit up Matter ; he feels a continual pain in his Breast, and can't lye down upon the place affected ; he's troubled with a dry Cough, his Cheeks are Red, a slight Fever approaches ; and at last when the Swelling tends to Suppuration, the other Symptoms of Suppuration take place. In the mean time, there are two Pathognomick Signs of a *Tuberculum* that's yet crude and beginning, namely, a dry Cough, and a slight pain in the outside of the Breast : To which purpose *Hippocrates*, *Text. 63. l. 1. de Morb.* says, While the *Tuberculum* is yet crude, it causes a gentle pain, and a dry Cough. Those who are ill of this Distemper, die suddenly very often ; for after Suppuration the purulent Matter breaks out into the Wind-pipe and choaks 'em. And for this Reason the further 'tis distant from the Wind-pipe and the center of the Lungs, the less danger there is of Suffocation ; for in such cases the *Pus* will break into the Cavity of the Breast, or else be thrown out by Urine. If a violent and sudden pain in the side seizes Consumptive Persons, they'll be delirious soon after with a high Fever, and so die in a few days. But when this Pain and the above-mention'd Circumstances appear, you may conclude for a certainty that the Consumption was owing to a preternatural connexion of the Lungs with the Ribs, which repeated Dissection will justify.

## IV.

I wish every particular Disease had two or three infallible Signs, as well as those I've now mention'd, 'Tis to be wish'd, I say, that some Physicians in all Ages had made it their Business to pursue and improve the Doctrine of Signs; had that been done, questionless the profession of Physick, had arrived at its *apex* long e're now, at least as far as our mortal State will allow. But they thought it a greater Business to foil an Adversary by Dispute in *Galen's* School, than to conquer Nature in the School of Nature by matter of Fact and new discoveries of Signs. In earnest, since two Diseases rang'd under the same Species, are hard to be cur'd (as I have often intimated) without each of 'em be duly specify'd to us by proper Signs; what difficulty will there be in the cure of such Diseases as are under the remotest Species and infinitely different one from another? For the purpose; when the Diagnostick signs of any Disease are once found out, the Remedies and Indications of Cure are presently set in a clear light; but if the Diagnosticks lie neglected or undiscover'd, a Disease of one Species is took for another of a far different kind; and so the issue of the Cure not answering the Opinion thus took up, the ignorant Physicians turn their Back upon many Diseases as being incurable; they censure the Method of Cure, cry out upon the uncertainty of Physick, deride the Doctrine of Critical Days, and neither know nor care to know the Art of Prognosticating. In fine, upon this false Conception, they judge rashly and inconsiderately of every thing. But after all, 'tis not Arguments but good Works that we must find out; 'tis not probable Reasons, but certain Indications of what's to be done, that will do



do our Business : For our Ratiocination may oftentimes captivate and please the Intellect, but it does not reach the Nature of the Thing.

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## C H A P. IX.

### *Of the Causes of Diseases.*

#### S E C T. I.

*Some Preliminaries calculated for the History and the Division of Causes.*

##### I.

**H**AVING thus gone through the Method of perfecting the History of Diseases by their Phenomena, our next Task will be to imbellish it with the Causes that give them a Being ; and here before we enter further upon this Subject, we cannot but take notice that Physicians are much mistaken, in thinking that some Diseases are Primary Diseases, always produc'd by the same Causes, and still requiring the same Method of Cure ; for the repeated observation of the most judicious Physicians makes it out, that such Diseases are not always primary and the product of the same Causes, but secondary, and the issue of divers Causes, and consequently that they are divisible into as many Species, as there are principal Diseases, and more constant Causes which produce 'em ; nay, that each of these Species into which they are subdivided, has peculiar Symptoms, and a peculiar manner of Invasion, Increase, and Declension : And, in fine, that each of 'em requires a quite different Method  
from

from any of the rest. This will appear more plainly from the following Example.

2.

The *Galenists* of former times took the Phthifick to be a primary Disease of one Species, springing always from the same source of Causes, namely, the distillation of Humours from the Head to the Lungs, and requiring in all Cases the same Method of Cure. Now, how far they are out in this Matter, is manifest from the diligent Observations of *Morton*, and other modern Physicians. For these being taken from the Store-House of Nature, give us certainly to know, that the Phthifick is frequently a secondary Disease retaining to divers principal Diseases, such as the Pox, the Scurvy, the Jaundice, the Green-Sickness, an Asthma, a spitting of Blood, Ulcers internal and external, Fevers, Melancholy, the small Pox, a Dropsy, a Dysentery, the Passions of the Mind, hard Study, and a thousand such occasional Causes. And as a Phthifick is foster'd by such various Diseases or Causes ; so it carries along with it various Symptoms quite different from the Phthificks of another Species, and requires as various a Method of Cure, and Remedies of as different a Nature. So that if you neglect to distinguish heedfully the Phthifick of one Species from that of another, and apply the Method of Cure and Remedies of the one to the other, you'll throw your Patient into evident danger, or undergo the discredit of not compassing the Cure.

3.

What I have said of the Phthifick, must likewise be understood of the other Diseases, especially those call'd Chronical ; and certainly this is one of the great defects in our Profession, that every Disease is not subdivided into as many Species as there are primary Diseases to foster 'em, and violent and  
constant



constant Causes to produce 'em ; that the Characteristick Signs of each Species are not given along with the first History, and a standing Method of Cure calculated for each. This Method, we see, is follow'd by the *Botanists*, who under the general name of any one Plant, *Carduus*, for instance, comprehend several Species of *Carduus*'s, and are so sedulous in describing the Magnitude, Figure, Colour, Taste, and other Accidents of the Plant, in order to distinguish one Species from another, that their Industry can never be too much extoll'd. On the contrary, Physicians finding some Diseases resemble one another in some Symptoms, comprehend them under one general Title, tho' in effect they ought to be divided into as many Species, as there are principal Diseases or violent Causes to foster them ; to these they promiscuously apply the same Method of Cure, tho' the Diseases are really of different Natures, and require different Cures, and ought, each of 'em to be rang'd under peculiar Heads ; like the Species of a *Carduus*, which tho' comprehended under one Genus, are, all of 'em, treated apart.

## 4.

The ancient Physicians used this piece of diligence with reference to some Diseases, but they neglected it in many more. The sleepy Disease, tho' it seems to be but of one Genus, was by them accurately divided into several Species, namely, a Cataphora, a waking Coma, a sleepy Coma, a Lethargy, a Carus, an Apoplexy, &c. and they ascribed to each Species, Diagnosticks, Prognosticks, a respective Method of Cure, and the other more necessary complements of its History. Tho' a Pleurisy and a Peripneumonia be one and the same Disease as to the Genus, upon the account of the Similitude of the Place affected, the Cause and some other Symptoms, yet the ancient Physicians made two distinct Species of 'em, and allotted to each of  
 'em

'em a separate History of Diagnosticks, Prognosticks and Cure. Tho' a Convulsion is a general Disease, both the Antients and Moderns have thought fit to split it into several Species ; for besides that great and flaming Illness, call'd the falling Sickness, there are three general Convulsions, call'd, *Optisthotonos*, *Emprosthotonos*, and *Tetanos* ; besides particular Convulsions of the Mouth and Eyes, the convulsive Asthma, the convulsive Cholick, the convulsive hysteric Fits, the Convulsions of the Muscles of the Abdomen, and many other Diseases retaining to inward Convulsions ; tho' Authors have not yet rank'd 'em under their proper Heads. Having mention'd the Convulsions of the Muscles of the Abdomen, I can't but take notice by the bye, that tho' they are very unfrequent, I had to do very lately with a Patient of 40 Years of Age, the Muscles of whose Abdomen were affected with violent subfultory Motions and Convulsions, and who recover'd upon the voiding of Blood by the hemorrhoid Veins, the injection of Milk Clysters, and the drinking of a due quantity of the Oil of Sweet Almonds with the Syrup of red Poppies dissolv'd in large quantities of Broth or Decoctions. To return. We have not only the above-mention'd Species of Convulsions, distinguish'd under respective Heads, but likewise their Diagnosticks, Prognosticks, and Precepts of Cure ; and as accurate a Description of their first History, as was consistent with those unpolish'd Times, in which Physick in conjunction with all good Arts, was run down by the Northern Nations, upon the declension of the *Roman Empire*.

5.

We see every Day that every principal Disease personates another of a very remote Species. The Hysteric Illness (for instance) not contented with its familiar Accidents, such as a sudden oppression  
cf



of the Senses, a Sense of Strangling in the Throat, and cold in the Crown of the Head, Convulsions of the Parts, &c. oftentimes imposes upon Physicians under the appearance of a Head-ach, Apoplexy, Palpitation of the Heart, a Cough, an Asthma, a Cholick, a Vomiting, a Looseness, Nephritick Pains, a Swelling and Pain in the Legs, a chillness of the extreme Parts, grievous Pains in the Back, and a great many such Diseases. I was lately call'd to a noble Lady that was ill of an Asthma, and despair'd of Recovery, after the fruitless use of Anti-asthmatick Remedies for three Months together; and being inform'd that she was frequently subject to Hysterick Fits, and in her present Condition was almost never without a Sense of Cold and a sort of Pain in the Crown of the Head; I did not stand to assert that her Asthma retain'd to a Hysterick Original. Accordingly I prescrib'd the Salt of Tin in Balm-Water, and apply'd to her Navel *Minfichtus's Emplastrum Matricale*, which has the Salt of Tin in its Composition; and in the space of a few Days she recover'd perfectly. A young Man at Rome was ill for eight Months, of a violent and very painful *Ophthalmia* or Inflammation in his Eyes, and coming to me after a vain Trial of all sorts of Remedies, I began to be suspicious of some violent Cause or principal Disease that personated an *Ophthalmia*, and accordingly ask'd him if he had ever been tainted with a venereal Illness. He made answer he had been ill of a Clap about 8 Years ago, and was cur'd of it in two Months time. Upon this, being sensible that the Seeds of that Contagion stick oftentimes to the Blood for 30 Years and above, and after apparent Health break out in the form of several Diseases; I presently concluded that the *Ophthalmia* was Venereal, and cur'd him in ten Days, with large quantities of the Decoction of *Sarsaparilla*, crude Antimony, &c. drunk like Mineral Waters.

From

From these and other Instances, which for brevity's sake I pass over in silence, I may justly conclude that Physick would receive considerable Benefit from a division of Diseases into as many Species as there are principal Diseases or violent Causes to foster 'em. For if we had had an exact and faithful History of the Prognosticks and Diagnosticks, the method of Cure and the general Precepts of an Hysterick Asthma, and a venereal *Ophthalmia*, the Physicians that these two Patients consulted at first, had not been impos'd upon, as they were. In fine, without such Divisions, the History of Diseases will be crouded with Errors and cover'd with Confusion.

6.

How many Mistakes were the Ancients guilty of, in curing the convulsive Asthma, and not knowing that it proceeded from Convulsions; till at last the Moderns observ'd that it arose not from a viscid Humour crouded upon the Lungs, but from the Convulsion of the Muscles of the Breast or Midriff, or of the fleshy Fibres interlac'd with the Lungs? With which view they christen'd it the Epilepsy of the Lungs, and allotted it a separate and distinct History of Diagnosticks, Prognosticks, and Cure. The Ancients were equally gravell'd in the cure of a Convulsive Cholick, till *Fernelius* discover'd that it proceeded not from the cold Humors in the Intestines, as they call'd 'em, but from the Irritation and Convulsion of the Nerves of the Mesentery; and that 'tis exasperated by Purgatives, Clysters, and hot Remedies, but appeas'd by *Anti-spasmodick*, Dulcifying, and Anodyne Medicines. The same Method ought to be observ'd in treating all Diseases, especially those call'd Chronical, the Fermentations of which are long winded and constant, whereas those of Acute Diseases are short, and are produc'd by slighter Causes; nay, they finish their Ebullition



under the appearance of a principal Disease, as is manifest in Fevers, Quinsys, and other acute Disorders.

## §. II.

Of the Antecedent Causes call'd Procataretica and Proegumena.

## I.

There's nothing so difficult as the Investigation of the very first and immediate Cause that calls up Diseases, and disorders the Patient without any other *Medium*. 'Tis this that has occasion'd the fatal Mistakes and Divisions that Physick now groans under. For we being destitute of Intuitive Knowledge, and uncapable to trace the secret Motions of Diseases with the Eye of Reason, are oblig'd to have recourse to the repeated use of our Senses. But all Physicians have not observ'd the same Conduct in the use of their Senses. In ancient Times *Hippocrates* and his Fellow *Grecians* laid so much stress upon the Efficacy of the Senses in enriching Physick, that, as *Petronius* said of *Democritus*, they spent their Life in the midst of Experiments, and so obtain'd a more intimate knowledge of the Causes of Diseases, only by the constant and uninterrupted exercise of their Senses. And tho' they could not compass every Thing, as it appears from what Fragments of their Works have surmounted the envy of Time; yet they went so far, that they drew the Curtain from before the Nature of Diseases, and dispell'd the Clouds that obscur'd the Truth. But the rest of the Physical Family that made Head against Diseases in the succeeding Ages, quitted the use of Sense, and rack'd their Wits to find out the true secret of the Causes of Diseases; and

and in regard, that is not to be reach'd by Reason without the Concurrence and Co-operation of the Senses, all their Advances of the Causes of Diseases are nothing but groping in the Dark ; so that they have only diversify'd the outward Denomination of Diseases by various ways of speaking, without touching upon the Essence and real Cause.

## II.

To observe a regular Method in this Enquiry ; we must take in the ancient Division of Causes into the *Procatartica*, the *Prægumena*, or Disposition of the Body, and the *Causa Proxima*, or that which is always accompany'd with the Disease, and without which the Disease can't be. The external Antecedent or occasional Causes, call'd *Procatartica*, whether Internal or External, are oftentimes slighted by Physicians, upon the account, that after the Production of the Disease, they either retire all together, or are conceal'd by the Patient : So that they bend all their Thoughts in considering and extolling the *Causæ Proximæ*, that lie remotest from the Verge of the Senses. Now, this is all against the Grain ; for we ought to take Indications of Cure from the least Circumstances, and from Causes of any Kind whatsoever, especially if they assume the Nature of *Causæ Continentes*, and either keep up or feed the Distemper, as in Chronical and Periodick Disorders, which could never last and renew their Efforts so long, if their immediate Cause were not rais'd up by the gradual Accession of fresh Fuel, that multiplies either from an internal or external Cause. This holds in all fermentative Distempers ; for even inanimate Bodies under Fermentation are subject to these Measures, and oftentimes stand in need of an external Mover, such as Heat, Motion, &c. to excite the Fermentation : In fine, considering



gree with the internal and remote Causes. All this is confirm'd by Dr. Sydenham, who in the Preface to his Works speaks to this purpose: *As 'tis impossible for a Physician to trace those Causes which have no Correspondence with the Senses, so 'tis not necessary: for 'tis sufficient, if he knows whence the Evil and its Symptoms arise, so as to make an accurate Distinction between one Disease and another.* I would therefore advise all Practitioners to interrogate their Patients particularly about the occasional Cause that set the internal Cause at work: for as the Knowledge of that renders the Cure easy, so the Patients are wont to conceal it either through Carelessness or Bashfulness. Is not that Physician a Madman, that would offer to cure a Fever occasion'd by Excess of Venery, with the same Method of Purging, Bleeding, &c. that's commonly calculated for such as take rise from other Causes? I was lately call'd to attend a Nobleman that was desperately ill of the *Sciatica*, after using all Sorts of Remedies to no purpose; and having finelt by chance, that about twenty Years before he had had Venereal Bubo's upon him, I thereupon suspected the *Sciatica* to be Venereal, and cur'd him in a few Days with a Decoction of *Sarsaparilla*, Crude *Antimony*, &c.

## VI.

The Cause call'd by the *Grecians* *αἰτιολογία*, and by the *Latins*, the disposing Cause, or the Disposition of the solid and fluid Parts of the Body to receive the Disease, is not a Cause, properly so speaking, because it does not act of it self; But in regard the Procatartick or occasional Causes cannot exert their Force, unless the Body be disposed to receive their Impression, some Authors have list'd this Disposition into the Number of Causes,

Causes, and thought it a proper Standard, both for giving and regulating Indications of Cure. Of many that lie with a foul Woman, only some are infected. A great many attend People that are ill of the Plague, and yet never have it themselves. Many join in the same Excess of Intemperance, that are not equally punished for the Misdemeanor. Several Persons lie equally under the Influence of one common Cause, but all of them do not fall sick. This gives us to know, that sometimes the occasional Cause would not exert its Force, unless the Solids and Fluids of the Body were predisposed to favour it, and so call up the immediate Cause. This Disposition is sometimes obvious to the Senses, and sometimes occult. Of the former Sort are the Scorbutick, as well as the Pocky, Hypochondriack, Epileptick, and such other Dispositions as are manifested to us by antecedent Diseases: And these we ought not to overlook in the Case of new Diseases; for the Indications of Cure ought to be levelled both at the new Disorder, and the old Disposition of the Body. The latent occult Dispositions are those peculiar to every Man, which the Ancients called *Temperament*, and distinguished into hot, cold, moist, and dry; and these again into simple and compound. Now these Temperaments or Dispositions taken in a large Sense, may contribute somewhat in producing a Disease; but at the same time, it is a difficult and idle Pretence to imitate the *Pseudo-Galenists* of our Times, in reducing all to such Qualities, and deriving from thence the immediate Cause of Diseases.

VII.

In effect, these internal Properties that dispose the Blood to receive various morbidick Impressions,



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VII.

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are infinitely different one from another : for one Constitution disposes the Blood to Coagulation; another to Dissolution, Inflammability, &c. one disposes it for a malignant Fever, another for an *Ephamera*, and so on. Now human Speculation can scarce reach the genuine Nature of these Dispositions, and the true Structure of the *Minima* of which they consist. But from the former way of Living, and the Use of the six Non-natural Things, we may guess at some general Qualities ; as whether the Dispositions are terrestrious, sharp, acid, moist, inflammable, gross, apt for Coagulation, &c. An intemperate Way of Living, unwonted Sitting up a-Nights, unusual Exercise, Anger, and such like impetuous Occasions, give us to know that the Blood is very active, sharp, and inflammable ; and that the Diseases which appear in that Juncture, are either produced or encouraged by this Disposition : So that the Indications calculated for the Cure of the Disease, ought likewise to have a regard to this previous Disposition. The Ancients gave you the Signs of the first and second Qualities over-abounding in the Body and disposing to Diseases ; and these they called *Intemperies*, some of which they made be accompanied with Matter, others without it, &c.

### VIII.

The Weight and Duration of Diseases is proportional to the Greatness and Continuance of this Disposition : As it is manifest from the Experience of those who give an indiscreet Loose to Intemperance, Venery, unwonted Watchings, unseasonable Labour, Passions of the Mind, and such other Inconveniencies; for these Men are longer and more dangerously ill, than others who used to live soberly and regularly. Having therefore  
found

found out the occasional Cause, by conversing with the Patient, we may make some Conjectures of the predominant Quality in the morbidick Disposition of the Solids and Fluids; as whether 'tis sharp, acid, viscid, inflammable, coagulating, &c. And in order to set all this in a clear Light, we must likewise be acquainted with the natural Constitution of the Patient; I mean, we must know whether it is hot or cold, moist or dry, (to use the ancient Names, without wrangling upon Words) or whether the Blood abounds (in the Language of the Moderns) with moist, terrestrious, fiery, or fixed, unactive Particles, which are all correspondent to the Qualities of the Ancients. Under the Head of the Patient's Constitution, we must likewise consider the solid Parts, whether they are flabby or bent, liable to Convulsions or Relaxations, near the Impulse of the Heart, or at a distance from it, watered with much or little Blood, plentifully stocked with fleshy or nervous Fibres, &c. For all these Circumstances are of use to unfold the inner Dispositions of the Parts; and unless they be duly weighed, a great many Inconveniencies will arise in the Use of Remedies, upon the account that these ought to be variously tempered and blended, in pursuance of the various Temperature of the Fluids and Solids, and the Diversity of antecedent Causes, &c.

### S E C T. III.

*Of the immediate Cause of Diseases, and the chief Heads that serve to discover it.*

#### I.

**H**AVING thus dispatch'd the occasional and dispositive Causes, we come next to the *Causa Proxima*, or the immediate Cause, the Presence or Absence



Absence of which gives a necessary Inference of the Presence or Absence of the Disease. 'Tis this Cause that raises every Day such scandalous and fatal Divisions among Physicians. But considering that our Thoughts cannot readily fathom what is a doing within us, we are obliged to take Help from such Methods as we are more sure of. The Men of Learning having labour'd long in vain in seeking out the immediate Cause, and adjusted the Nature of the foreign Ferment that immediately produces every Disease, came at last to this Conclusion, That if so be we discover the Indications of Cure, and the Remedies proper for the Disease, 'tis no great matter whether we know the immediate Cause or not. This Assertion is justified by the Empiricks, who contemning the learned Speculations of Physicians, with reference to the immediate Causes of Diseases, are oftentimes as happy in curing Diseases with their *Arcanum's*, as the rational Sect are with their elaborate Methods and Speculations. And the same thing appears from Epidemick Diseases, produced by the faulty Constitution of the Air; the immediate Ferment of which cannot be traced or adjusted by us, though at the same time we are not ignorant of the Method that extirpates the Diseases thus produced by the unknown Cause: for, upon a sedulous and prudent Observation of what affords Relief, and what is prejudicial, we readily light upon such Methods. In fine, What candid Physician can deny, that he is almost entirely unacquainted with the internal or immediate Cause of Diseases, and yet undertakes their Cure; nay, and happily compasses the End, by virtue of a Method obtain'd by long Use and Experience.

## II.

But after all, we can point to several Ways of being let into the Knowledge of the immediate Cause of every Disease. In the first place, we may come at it by knowing the occasional and disposing Causes, of which above. In the second place, there are several Diseases, the immediate Causes of which are easily brought to Light; such Causes are Water in a Dropsy, purulent Matter in an *Empyema*, and the Stone in Nephritick Cases; the Removal of which, sometimes argues the Removal of the Disease. Though indeed it must be confessed, that oftentimes this does not hold, by reason that a remoter Cause feeds the Hydropical Water, the Empyematical *Sanies*, and the Nephritick Stone, and is inaccessible to our Speculations: In which Cases we must have recourse to the following Artifices. Thirdly, We may trace the immediate Cause by the *Excreta* and *Retenta*, the Disorders of the Tongue, Eyes, Face, and other Parts that are obvious to our Eyes. In the fourth place, the *Juvantia* and *Lædientia*, and the Method of Cure appropriated to any Disease, may give us some Light. A Fifth Help will be an Investigation of the Nature of what proves serviceable or disserviceable: for if we once discover that, either our Senses or our Reason will readily conduct us to the Knowledge of the minutest constituent Parts of the immediate Cause. The Sixth is the Mutation of one Disease into another, of the like, or of a quite different Form. The Seventh is the Disorder of the principal Functions, *viz.* the Pulse, Respiration, Strength, &c. And the Eighth is a due Consideration of the Nature, Force, &c. of the Symptoms that accompany the Disease.

## III. To



## III.

To begin with the *Excreta* and *Retenta*: The chief Particulars of this Class, are the Ordure, Urine, Spitting, Sweat, Vomiting, Blood drawn forth by opening a Vein, the Colour of the Skin, Nails, Eyes, &c. We are sufficiently informed by the Chymical *Analysis*, what Principles the Urine consists of; and particularly, that in a natural State, an Armoniack sort of Salt bears the Ascendant, and gives both Colour and Weight to the Urine: But in a sickly State, the Nature and Mixture of the Salts is (perhaps) as various as the Diseases themselves. As the Urine therefore is more or less high colour'd, it argues a Plenty or Scarcity of such Salts which produce Diseases. Those who fall into a fatal or mortal Suppression of Urine, are seized with a Stupidity, a Trembling, and an universal Shivering; and at last, with a Fever, Apoplexy, and the other Disorders of the Nerves: By all which we are taught what Diseases the Salts of Urine, abounding in the Blood, are apt to produce. In acute Diseases, pale and thin Urine prognosticates a Frenzy and the Diseases of the Head; so that we may reach the Knowledge of the first and immediate Cause of such Diseases, if we are but acquainted with the genuine Nature of the Principles of which the Urine consists; and so may fix upon the Cure, by learning out of the Physicks what things are contrary to such and such Principles. Further, the Smell and Colour of the Excrements or Ordure will give us to know the Nature of the immediate, or rather the antecedent Cause, from whence the immediate Cause is derived. If the Excrements be too yellow, or rather green, black, &c. they speak a Redundancy of acid, sharp, and vitriolick Salts;

Salts ; if they are white, copious, or liquid, they speak either the Inactivity of the Ferment of the first Passages, or an undue Paucity of saline and sulphureous Parts, these being the Parts that give Smell and Colour. Above all, the Tongue affords the closest Signs of the State of the Blood : An acid Taste upon the Tongue, betrays the acid Constitution of the Blood, and that of the other Humours deriv'd from thence ; a salt Taste speaks the Saltness of the Blood ; a bitter Taste gives us to know its abounding with bitter Particles ; a viscid, mucous, insipid Taste, speaks Plenty of the like Particles : If the Tongue is moist, so is the Constitution of the Blood ; if dry, then the Blood is of a dry, inflammatory Nature. In fine, take this for a Secret, That the most certain Signs of the State of the Blood are taken from the Tongue : for that Organ being a Collection of an infinite Number of little Glands and nervous *Papillæ*, through which the morbidick redundant Parts are immediately convey'd without suffering any Alteration by the way, as they do in other Emunctories ; we ought therefore, in the Knowledge of Diseases, to lay a great Stress upon the Affections and Alterations of the Tongue ; especially considering that the other Signs do frequently deceive us, whereas this seldom or never does. Take care then, that you never visit a Patient without minding his Tongue, let the Disease be what it will, especially if you suspect internal Inflammation ; for these you may certainly learn from the Tongue, which dries upon the least inflammatory Disposition, and grows drier and drier as the Inflammation rises.



## IV.

Sweat and Vomiting lie under the same Rules with the Urine and Ordure; for the Colour, Smell, Quantity, &c. of the Humour thus evacuated, discovers the respective Nature of the immediate or antecedent Cause, as above. The Blood drawn by opening a Vein, will make the same Discovery: if it be too bright a Red, it speaks Plenty of volatile and inflammable Parts; if blackish, then ter-  
restrious and fix'd Parts abound. In all Inflammations of internal Parts, especially an acute Pleurisy, the Blood drawn has a white Gelly, like Crust, upon its Surface; which indeed is nothing else but the Nutritive Chilous Part of the Blood, disengaged from the Body of the whole Mass, and gathered into a white Crust, by vertue of the excessive Heat of the Blood, and its being over-stock'd with volatile Particles. So that in the Cure of such Diseases, the over-bearing Fermentation ought to be restrained by repeated Bleeding, and by *Anodyno-Alcaline* diluting Medicines; that by this means the ruddy and nutritive Particles may be amicably link'd together, and a Stop put to such inflammable Dissolutions. The Consistence of the Blood shews likewise what Principle 'tis over-stock'd with. The Blood of Hectick Persons is of a bright red Colour, and does not easily congeal; and at the same time they are lean, watchful, peevish, &c. from whence we learn that there is a Redundancy of somewhat that is too sharp in their Fluids. *Vesperus Exer. de Apoplex. Fol. 429.* acquaints us, That in dissecting the Corpse of some that dy'd of continual, and some of malignant Fevers, he found the Blood fluid, and not congealable. *Simon Pauli de Febr. malign. sect. 2.* observes, that in several dangerous Cases, he found the  
Blood

Blood drawn out of a Vein to be very red, and almost of the Colour of the Flower of the *Indian Throatwort*, with little Serum. The same thing is observed by several Moderns in pestilential Cases. We conclude therefore, that the Colour, Consistence, and other Qualities of the Blood drawn by opening a Vein, may point to the latent Constitution of the immediate Cause.

V.

Since I am speaking of the Nature of the Blood, I must observe by the bye, that no Physician can cure a Fever happily, without he inform himself of the State of the febrile Blood, before he exhibits any Remedies; as whether 'tis too rapid, thin, inflammable, &c. or on the other hand, apt to congeal, thick, malignant, &c. For in such different States of the Blood, the Indications of Cure must be diversify'd accordingly. When the Blood is apt to dissolve and boil over with a furious Rage, it must be treated otherwise than when it tends to Coagulation, Ropiness and Malignity. We must not, in the very Beginning of Fevers, commence the Cure of all promiscuously by such Medicines as cleanse the first Passages, (as they call it) and purify the Blood it self; for that untimely Use of Purgatives either redoubles the Fever, or renders it malignant. There is no certainer Sign of an imminent Hysterick Fit, than the Colour of the Urine; for it turns, a little before the Paroxysm, from a citrine to a watery thin Colour. We observe further, that in violent Commotions of the Mind, the Urine turns from a high red, to a watery pale Colour; and does not retrieve its natural Colour, till the Passion is quite gone off. This watery Colour of the Urine is a constant Forerunner of a convulsive Poroxysm; and in



Spasmodic Cases the Urine is almost always thin, clear, and plentiful. From these Observations we may draw this Inference, That the above-mentioned Diseases are either produced or fed by the Salts of the Urine. The Colour of the Skin is likewise to be regarded: If it be white, pale, yellow, blackish, brown, or the like, it denotes the abundance of such Parts in the *Viscera*, or the Blood.

## VI.

Next to the *Excreta* and *Retenta*, are the *Juvantia* and *Ladentia*, or the Method of Cure appropriated to every Disease; by which we may trace the Nature of the immediate, or the antecedent Cause. To instance in Intermitting Fevers: They rage chiefly in the Spring or the Autumn, at a time when Crudities are thrown in upon the Blood, either thro' the Intemperance of the past Summer, in eating Fruit and drinking Water, or through the nipping Cold and unusual Wetness of the preceding Winter. Bleeding and Purgation, in the Beginning of these Fevers, makes 'em worse: Their concomitant Symptoms are Cold, Weariness, Shivering, a gentle Heat, a slimy Tongue, and immoderate Thirst; the beneficial Medicines are those of a bitter, sharp, and volatile Lixivo-alkaline Nature. The Medicines that inflame the Disease, are refrigerating Syrups, too moist a Diet, slimy and inactive Food, &c. The Fits are exasperated by such Food as is not easily digested, and by over-feeding; and on the other hand, Abstinence makes 'em gentler. If you commence the Cure of these Fevers with the *Febrifuga*, you will throw your Patient into many Disorders. Such is the Series of the *Juvantia* and *Ladentia* in intermitting Fevers: from whence 'tis manifest, that

that their immediate Cause is somewhat of a crude, slimy, viscous, and congealable Nature. The principal Source of the Gout and the Stone is Wine, Venery and Intemperance ; and the Antidote is the drinking of Water, Milk, and a sober way of living ; but above all, a due Regard to the Stomach. From whence we argue, That the immediate Cause of the Gout is something of a sharp, terrestrious, and acute Nature ; that being readily fed by Wine, Venery, and Intemperance ; and there being nothing more effectual in breaking the Shock of sharp, terrestrious, and acute Particles, than Milk and Water, which consist of soft and flexible Parts, and such as easily make their way. Now this Scrutiny ought to be minded in all Diseases, especially such as are encouraged and kept up by some occult Causes, or the Influence of the Air : For by exhibiting some Remedies in the Beginning, which may be tried without Danger, and observing whether they do good or harm, we may quickly inform our selves of the Nature of the immediate Cause, and its Tendency to depart through this or that Passage ; and that chiefly in occult Diseases, or such as are of a recent Epidemick Nature ; in which we can't avoid the suffering of one or two of our Patients to run the risque of the Disease, till such time as a Judgment can be made upon the *Juvantia* and *Lædientia*, so as to form a proper Method of Cure.

VII.

In the fifth place, a due Survey of the Nature of what benefits or prejudices the Patient, will lead us to the Knowledge of the immediate Cause. In Hæctick Cases, for Instance, all the World holds Milk to be the chief Remedy : Now the

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Principles of which Milk is compos'd, are Cheefe, Butter, and Whey; and the Cheefe and Butter consist of soft, mild, alcalino-sulphureous Particles, &c. So that the Hectick, Morbifick Particles in the Blood must be sharp, rigid, pointed, &c. In Intermitting Fevers, great Benefit is obtained by the Use of such Medicines as are bitter, sharp, Lixivo-Alcaline, &c. Now the Particles of which these consist, are stiff, acute, sulphureous, &c. and consequently the morbid Particles of such Fevers must be the Product of viscid, gross, and unactive Matter. In ardent Fevers we find Benefit in the Emulsions of the Seeds, large Potions, gentle Acids, and Anodine Remedies; the Particles of which are mild, gentle, and watery; so that the Particles of ardent Fevers must consist of a volatile, sharp, acid, and impetuous Substance. In several lingering Fevers, and some chronical Distempers, we receive great Benefit from the austere bitter Medicines that approach to the Nature of Astringents; such as the Peruvian or Jesuit's Bark, Tormentil, Cinquefoil Roots, Crude Allum, Chalybeats, Ash Bark, Vitriolick Chalybeat Medicines, and such other things as operate by Astringency. From these Observations we make a just Inference, That such Fevers are owing to the drooping and flaggy Spring of the fluid and solid Parts, and not to the pretended Obstruction of the Viscera. For accordingly we find, that your stiptick, bitterish, and somewhat spirituous Medicines, which corroborate and compact the solid and fluid Parts, enable them to make a powerful Resistance to the coming Ferment that tends to raise a febrile Heat in the Blood, and dextrously throw it out by the repeated Circulations of the thus corroborated Sieves of the Viscera.

VIII.

If Sweating be necessary, and does not appear upon the Administration of proper Remedies, let Blood, and 'twill break immediately; especially if the Stop was owing to an over-bearing Croud of Humours, and a stifling, as 'twere, in the Vessels. I know an Hypochondriack Person that's frequently seiz'd with a dismal *Asthma*, that e'en almost choaks him, and attacks him all on a sudden with a Distention of the Belly, and a murmuring Wind rolling up and down: And whenever I am called to him, I order Bleeding immediately; which is scarce sooner over than a Cessation ensues of the *Asthma*, the Distention of the Belly, and the Fear of imminent Suffocation. Repeated Experience has taught me, that the most obstinate convulsive Cholicks arising from the Fury (as 'twere) of the Spirits, are speedily and successfully cured by Bleeding, and anodine Remedies extremely diluted; as also that sanguine Apoplexies (that is, such as proceed from the Stagnation of the Blood about the Vessels of the Head, and are accompany'd with a Redness of the Face, a Turgency of the Veins, &c.) yield to no Remedy so readily as to the earliest Bleeding. Those who promiscuously fall upon Apoplexies, whether Sanguine or Pituitous, with Purges, Vomits, and spirituous Remedies, without premising Venesection in the sanguineous Kind, ought to be reckon'd Madmen. I was once called to a Woman of 60 Years of Age, that had a Palsy of one Side, besides a Palsy of the Tongue, and cur'd her in three Days with the following Method: After drawing ten Ounces of Blood out of the Arm of the Paralytick Side, I prescrib'd the following Mixture: Take Water of Peony Flowers and *Carduus Benedictus*, of each



three Ounces; Spirit of Sal Armoniac, twelve Drops; Powder of human Skull and Diaphoretick Antimony, of each a Scruple; mix and make a Potion to be taken off immediately: Let the whole Spine of the Back, and the paralytick half of the Body be anointed hot with Oil of Foxes mix'd with the Spirit of Wine: Let her hold in her Mouth a Gargarism of the Decoction of Mistletoe of the Oak, and Oxymel of Squills. By the Use of this *Recipe*, I say, she recovered in three Days Time, All these Observations are Evidence, that the above-mention'd Diseases are owing to the crowding and penning up of the Humours or Spirits in any Part; which yields to no Remedy so readily as to Bleeding, either in the Part affected or near it; for of all the wonderful Effects of Bleeding this is the chief, that it sets forward the Blood that stagnates, or has a Tendency that way, opens its Consistency, if it be too compact, and restores it to its native Fluidity: For when the vital Fire has more room allowed it, 'tis rather thereby blown up than extinguished; especially if the Impulse of the Heart, which causes and keeps up the circular Motion of the Blood be continual and strong.

## IX.

We come now to the sixth Article, namely, the Conversion of one Disease into another, of the like, or of a quite different Form. That this may afford some Light touching the immediate Cause, is plain from *Ballonius Consil.* 13. where he speaks to this purpose: Hippocrates order'd the mutual Succession of Diseases to be carefully minded, upon the account that many Symptoms happen in long tedious Diseases; which by vertue of a fallacious Similitude, impose upon even good and learned Physicians; and new Diseases,

Diseases, like an upstart Offspring, follow upon, and spring out of others. An Arthritick Illness is easily transformed into the Cholick; so that he who knows the immediate Cause of the former, must needs know of the latter. All Persons subject to the Stone are apt to have the Jaundice, and *è contra*; if therefore the immediate Cause of the one is known, the other cannot be lost. The striking in, or irregular Cure of the Scab or Itch, is followed by many unlucky Diseases; particularly, a spitting of Blood, an Apoplexy, a Dropfy, lingering Fevers, &c. Hippocrates tells you in *Epidem.* That an *Athenian* coming to *Mile* to be cured of an ugly Itch or Scab by the Use of the hot Baths, was cured accordingly; but fell soon after into a Dropfy, of which he died. *Sennertus* informs us, that this Case is frequently followed by a Fever and Blindness; and particularly in *Prax. Par. 3. Sect. 2. cap. 44.* That a Boy having struck in the Scab with Liniments, was seized with Blindness and a Fever, of which he died, upon the Accession of an Epileptick Fit. The Itch is a good Sign, when it happens in a Quartan Fever; for soon after its Appearance the Quartan will go off, and the Itch it self will disappear without the Use of any Remedies: Witness repeated Experience. He therefore who finds out the immediate Cause of the antecedent Disease, can't be ignorant of the Cause of the subsequent. For the Purpose: Upon the Consideration of the Itching, the Foulness of the Skin, the way of Living, and the Method of Cure, we conclude that the first or the immediate Cause of the Scab or Itch, is a sharp briny Humour, lodged in a viscid or thin Juice; and it is probable the Diseases that spring from the striking in of the Itch, are owing to the same Cause. You may read many Instances of the mutual Transmu-



tation of Diseases, in several Physical Authors; to which I refer the Reader,

## X.

The Seventh Introduction to the Knowledge of the immediate or antecedent Cause of Diseases, is the Injury that the Parts and principal Functions sustain. The Palpitation of the Heart proceeds, for the most part, from some Impediment about the Heart; for in dissecting the Corpse of such as dye of that Illness, we find in the Ventricles of the Heart, or the neighbouring Parts, *Polypus's*, *Aneurisma's*, Ossifications, great Clots of Blood, tartareous Matter, Worms, and the like. And particularly about five Years ago, I observed in the Body of a Man of 60 Years of Age, that died of the Palpitation of the Heart, a huge *Aneurisma* in the ascending *Aorta*, just by its Insertion in the Heart; and in the Cavity of that *Aneurisma*, a *Polypus* as big as a Goose Egg. Nor are such Impediments only found in the Palpitation of the Heart, but likewise in other Disorders of the Lungs and the Heart; such as an *Asthma*, an Intermission of the Pulse, and the like. And here I must take notice by the bye, that repeated Dissection has taught me, That if these Disorders of the Heart proceed from an Organical Cause, namely, a *Polypus*, an *Aneurisma*, &c. they affect the Patient not by Intervals, but continually; the Face is of a pale, or some other sickly Colour; and the Patient is molested with other grievous Symptoms, that are near ally'd to a Dropsy. But if they are produced by the Acrimony and Irritation of a fluid Matter, they affect the Patient only by Intervals; and particularly when the Wind is Southerly, and the Mind disturbed with passionate Commotions; his Countenance retains its natural Colour,

Colour, and the other Symptoms are neither so grievous nor continual : So that where-ever the first and repeated Symptoms appear, there must we fix the Seat of the Disease. The human Body is a Bundle of Fibres variously interwoven and corresponding to one another, which are bended this way or t'other by the Fluid that moves within, as by a Spring : And from thence proceeds that great Sympathy and united Consent of the Parts. In mentioning this admirable Consent and Sympathy of the Parts, I do not countenance the ancient Opinion of Vapours rising, which the Moderns have sufficiently defeated ; for I derive all Consent in the Body, either from the Vicinity of the Parts, as that of the Midriff and Pleura, the Bladder, the *Intestinum Rectum* ; or from a Communication of Vessels, such as that of the Veins, Arteries, Nerves, or other Vessels among themselves ; or that of adjacent Parts, the Liver, for Instance, and the Intestines, by virtue of the *Ductus Cholidochus* ; or else from a Similitude and Continuity of Substance, such as that general and truly wonderful Similitude and Continuity of all the membranous Parts of the Body ; by virtue of which, several things happen in a living Body that are almost incredible, and beyond the Reach of our Reason ; insomuch that Nature refusing to disclose its ways, constrains us to a blind Submission. Granting this infallible mutual Consent of the Parts, I am truly of the Opinion, that in tracing the immediate Cause of Diseases, the Marks taken from such Parts as lie at some mutual Distance, cannot deceive us under the Colour of Truth ; but will, in proportion to the Sedulity of our Enquiry, conduct us sooner or later, with greater or lesser Facility, to the Knowledge of what's a doing in the remoter and occult Confines of Nature ; especially if the morbidick Cause sets up its Stand-



dard in those Parts appointed for some publick Function, such as the Heart, the Lungs, the Brain with the nervous System, &c. which do always keep to the same Order and Kind of Symptoms, when they are in Disorder. This happens chiefly in malignant Fevers, the Source of which uses to reside sometimes in the animal, sometimes in the vital, and sometimes in the other Parts; which Practitioners discover, by considering the Disorder of the Operations peculiar to such Parts. So much for finding the Seat of the immediate Cause; as for the Investigation of the Nature of it, 'tis accounted for in the foregoing Theses.

## XI.

The Eighth Topick from whence we derive the Knowledge of the immediate Cause, is the Symptoms that either accompany or usher in the Disease; their Nature, Force, and way of Invasion, as well as their Remission or Heightning upon the Use of Remedies. Those who are seiz'd with a pitting Apoplexy, are pale in the Face, and drown'd in a deep Sleep; their Pulse is low, and their Disease yields to Vomits and Purges, but gains Force from Bleeding. Upon these Considerations we conclude, that such Apoplexies owe their Being to somewhat that's viscid and gross, and of small Force. On the contrary, in a sanguineous Apoplexy the Face is flush'd, the Blood Vessels of the Head are extreme turgid, their Sleep is not profound, nor their Pulse so low: Bleeding gives them Ease, and Vomits and the other impetuous Remedies inflame the Distemper. From this Series of Symptoms we may readily believe, that the Cause of such Apoplexies depends upon the interrupting of the Course of the Blood, Spirits, &c. in the Brain, or the adjacent Vessels, where being stopp'd they

they make an impetuous Shock. A Bilious Cholick is oftentimes attended with a Cessation of Speech, and a hoarse Voice, which sometimes continues during the whole Period of the Disease: And this same Hoarseness is observed in Bilious Fevers; whence we make a just Inference, That a Hoarseness and Cessation of Speech, in acute or such other Diseases, argues the Dependence of their immediate Cause upon the Bile, or upon sharp, volatile, and sulphureous Parts. This Speechlessness is no uncommon Forerunner of Epileptick Convulsions in a Cholick. Sometimes we meet with Pains that attack the Patient at set times, like Intermitting Fevers; in which Cases you may rest assured, that the immediate Cause is not bred in the Part affected, but comes of a foreign Original: And I have sometimes observed, that when no other Remedy would do, a gentle Purgative exhibited about three or four Hours before the Invasion of the Pain, has dispelled it in a short time, especially when the Scene is laid in the lower Belly; nay, repeated Purgation is an effectual Remedy for any other Periodick Pains.

## XII.

The latent Imposthumes of the Liver, that give way to no Remedies, discover themselves by unsufferable Pains in the Leg, or the Calf of the Leg. This Assertion is attested by several Authors, and particularly by *Hollerius, Com. 2. ad Lib. 2. Coac. Hip. Fol. 348.* His Words are to this Purpose; *I was surprized twice or thrice with insufferable Pains in the Leg, or the Calf of the Leg, that neither Fomentation, nor Liniment, nor Cataplasm could remove. When the Patients died, I laid open their Legs, and there issued out a whitish, pale, and light Pus, that lay upon the Interstices of the Muscles*  
and,



and was kept in by the greater Vein ; and in tracing the Place from whence this purulent Matter came, when I came to cut up the Abdomen, I found the Liver ulcerated and putrified. Those who are thus affected must needs dye of it. *Jacotius* made the same Observation in *Coac. Hip.* as well as *Baubinus* in his *Observ.* and *Tab. Anatom.* So much for the way of enquiring after the immediate Cause of Diseases ; upon which Subject I have touched, as far as my Weakness would allow, upon the noblest and most useful Heads, leaving the rest, for Brevity's Sake, either to my own future Adventures, or to the Diligence of Posterity.

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## C H A P. X.

*Of the right way to form Indications.*

### S E C T. I.

**A**FTER laying down a History of Diseases, in a Description of the *Phænomena* and Causes, our Historian must with equal Diligence apply himself to the Method of Cure, or the constant Indication taken from the repeated History of Diseases : And, to confess the Truth, the first Foundation of Practice is the Indications, upon the Detection of which, 'tis an easy matter to cull Remedies out of the Store-House of Nature ; for the forriest Apothecary's Boy knows that Rhubarb purges, Antimony moves to Sweat, Hoglice provoke to Urine, &c. But when Purgation is seasonable, when 'twill be proper to raise a Sweat, and under what Cautions, that's a Question of another Kidney, the due Solution of which requires

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an aged Course of Use and Experience: For, as *Hippocrates, Lib. de Arte*, says well, Whatever is beneficial, proves such by vertue of the right Use and Application. This therefore shews the Vanity of such Authors, as crowd their Books with Forms of *Recipe's*, without taking the least notice of Indications; or if they do, 'tis only some general Advance, and the Product not of fertile Nature, but of giddy Speculation.

## II.

If any thing in the Practice of Physick wants to be corrected more than another, 'tis the common Indications; which being raised upon false Hypotheses, afford us nothing but the idle Whim of Speculation. The *Galenists*, deriving the Cause of all Diseases from their four Humours, are always harping upon the same Story, when they come to the Cure. For when they are called to a Patient, their first Endeavour is to find out the peccant Humour of the four, which at last they pitch upon, after many Questions and Arguments. The peccant Humour being thus determined, all their wise Views center in this, To prepare the peccant Humour for Evacuation, and so to carry it off accordingly; which they do not once or twice, but again and again in the same Disease; and so run the Indications of all Diseases in a Circle (as 'twere.) To illustrate the Matter with an Example: They lay down an infallible Hypothesis, that Tertian Fevers take their Rise from the Bile; in pursuance of which, all their Indications are levelled at the Evacuation of the peccant Bile by repeated Purgation: And when all comes to all, we observe, though a great deal of bilious Matter is evacuated, the Fever increases, and instead of a simple one becomes double; nay, the  
double



double Fever turns Chronical, or at last Mortal. After reading the Observations made by the *Galenists* about two Centuries of Years ago, I cannot express how sensibly I was affected with their supine Negligence, when I saw simple Tertians turned into annual Fevers, by the repeated Use of Preparatives and Purgatives, and abandoned by the Physicians as incurable. Nay, the same was the Fate of the Quartan Fevers, and other Chronical Diseases. However, there are two things that sufficiently defeat the pretended Indication of evacuating the Bile in Tertian Fevers. The first is the late Discovery of the *Peruvian Bark*, and other artificial *Febri-Fuga*; which, if seasonably and prudently exhibited, do happily dispel all Intermittent Fevers from any Cause whatsoever, without any Preparation or Evacuation of the Humours. The Second is daily Experience, which proves, that Intermittent Fevers are either duplicated or exasperated with grievous Symptoms, by the exhibiting of Purgatives in the Beginning; and that upon the frequent Repetition of these Purgatives, they become Chronical and Fatal. This Narrative of Tertian Fevers may serve as a Pattern for the Indications of other Diseases, and a sufficient Instance of the gross Prejudices occasioned by a false Method of taking the Indications of Diseases. Now-a-days we cure many Diseases with the slightest Remedies, or by a mere Abstinence from Remedies, without any regard to the Influence of the four Humours in producing them.

### III.

The modern Practitioners endeavouring to avoid the Rocks of the *Galenists*, have split upon greater themselves; for notwithstanding they certainly knew, from the Example of the *Galenists*,  
that

that Physick divorced from Observation may perhaps be polished and licked into Form, but can never grow or be improved : Yet, to humour the Genius of this Age, they deduced the Causes of all Diseases from the giddy Notions of *Alcali* and *Acid*, and put their Indications of Cure upon the same Foot ; contenting themselves with a bare universal or general Proposition, as being entirely ignorant what Acid produces any Disease, or what Alcali removes it. The Groundlesness of all their Opinions is manifest from daily Experience, which teaches us that our Constitutions may be injured by a thousand things, and that every Disease depends upon a præternatural and peculiar Specification of the Humours, So far are the Causes of Diseases from being confined within the narrow Verge of four Humours, or that of an Alcali or an Acid. For there lies a just Charge against the bitter and sharp Particles, the relaxating and contracting, (to use the Language of the methodical Doctors) or the congealing and dissolving, the harsh, the salt, and a thousand other Kinds of Qualities. Nay further, some Diseases have no other Cause but the Alteration of the due and natural Texture or Configuration of the constituent Parts of any Humour, produced either by an external Cause, or the internal Agitation of the struggling Parts of that Fluid, or of the Solid ; by vertue of which they acquire a new Motion, Figure and Position, and so become the Cause of Diseases. And whatever is capable to controul that præternatural Texture, and retrieve the primitive Spring of the Humours, whether it is hot or cold, acid or alcali, or possessed of opposite Virtues, or administered outwardly or inwardly, you may still be assured that it will effectually remove such Disorders. Thus we find that in the way of Practice, one and the same Disease is equally cured by contrary Medicines



dicines and Methods, or by hot Remedies as well as cold. Thus according to *Henricus Heer*, the Spaw-Waters, which are well known to remove the Suppression of the menstrual Flux, are at the same time the most successful Remedy for moderating the Excess of that Flux. All these Arguments of Experience are further Motives to induce us to believe that Nature is the best Physician. And as good Aliment affords at once Matter for Life and for Death; so the same Motions of the Humours that gave the Disease, do, after repeated Circulation, prove the Authors and Guardians of Health, unless their regular Course be disturbed by the disorderly Methods of some Physicians. Now I am upon this Subject, I can't but acquaint you by the by, that if any one had an Itching to form a new fictitious System, and to make Medicines operate by imaginary Qualities, he would be equally happy in curing, and equally unhappy in killing, with those who go upon more solid Hypotheses. For 'tis not Hypotheses, but Medicines that perform the Cure; and that not so much by any sensible Evacuation, as by retrieving the primitive Spring of the Fluids or Solids.

#### IV.

Many Diseases spring from a trifling Cause, and thereupon mustering up a dismal Train of Symptoms, are cured without any sensible Evacuation; such are the Bite of a Viper, the violent Disorders occasioned by the Smell of a Ship or the Sea Air, and sometimes reaching the very Agony of Death, the dismal Distempers occasioned by looking upon the Object of one's Hatred, the Diseases arising from passionate Commotions of the Mind, and an innumerable Train of such like Disorders; which are produced in the human Body  
without

without the Ingress or Egress of any visible Matter to foster them, merely by the Impulse of external Bodies, or a violent Sally of Imagination. As many heavy Diseases depend upon a trifling Cause, that sometimes is invisible, and not introduc'd within the Body; so a great many considerable Distempers are cured in a Minute, not by any sensible Evacuation, but by the Production of some new Change in the Position, Texture, Figure, and other Qualities of the Humours that gave the Disease a Being. Such are the Cures of Quartan Fevers, or other Diseases accomplished by a sudden Fright, by the Application of specifick Remedies to the external Parts without any sensible Evacuation, by the Change of the Air from one Climate to another, &c. Of this last sort of Cure, I had a remarkable Instance lately, viz. A very good Friend of mine that never fail'd to have the Sciatica and the Piles, in the *Neapolitan* or adjacent Air; and after a vain Trial of Remedies, is cured almost in a Minute, by coming into *Campagna d' Romæ*, or to *Rome* it self. The *Chinese*, and other *Indian* Physicians, cure Diseases by burning with the *Moxa*, and pricking with a Needle; nay, they cure Intermitting Fevers almost to a Miracle, only by burning in the Ankle: Witness *Will. Tenrine*, in his Treatise *de Arthritide*. All this is more than sufficient Evidence, that our Constitution may be hurt a thousand ways, and that Diseases are both produc'd and cur'd after a wonderful manner, that's scarce perceivable by us. For as *Hippocrates* says, 6 *Epidem*. Nature finds ways to it self without Forethought, and does what's expedient without any Instruction. Upon the whole, 'tis a very imprudent thing in a Physician to confine the Causes of every Disease to the four Humours, to an Alkali or an Acid.



## V.

*Pliny* says, We are ignorant of what we live upon; but to my mind, we are less acquainted with that which makes us sick: For the very first and immediate *Minimum* that produces Diseases, is truly incomprehensible to us. But now, since we are encompassed with such Difficulties, Whence can we draw out Indications of Cure? Why, I freely own that in such Straits we can only have recourse to the Testimony of our Senses; that is, after we have long and patiently observed how Nature demeans herself in the Production of a Disease, as well as in the Concoction and Separation of the peccant Humour, we may then establish a Doctrine of Cure nicely calculated to Nature's Footsteps, and still keep in view the Remarks we have made upon the *Juvantia* and *Ladentia*. In this Point, that Reason of which Physicians boast so much, must be subservient to the Empiric Method; I mean the Empiric way polished by Literature, fatigued by several Processes of Observations, and put upon Action by the Direction of the Mind: For the Helps of Theory do first raise, and then frustrate our Hopes. Who can deny, that after all the Anatomical and Physiological Inventions of this Age, we fall still short of the more solid Indications of Cure? And that Physicians are now more divided upon the adjusting of the morbid Causes and Indications of Cure, than they were before these Rumours of Novelties were box'd about? The Practice therefore of curing Diseases must be promoted by Practice it self. This is confirmed by *Dr. Sydenham*, the most diligent Observer we have since *Hippocrates*: Speaking of the occult Causes of Fevers, he goes on to this Purpose; *This*

*I know*

*This I know from manifold Observation, that the above-mentioned Species of Diseases, especially the continual, are so very different one from another, that the same Method which cured your Parents in the Beginning of the Year, will perhaps kill 'em towards the latter End of it. And again, not much lower, I have much ado to manage it so, that One or Two of those who first employ me, are not hurry'd away before I can trace the Genius of the Disease, so as to fix the Cure of it. In fine, considering this Obscurity and Inconstancy of Things, 'tis impossible to be led by Theory to solid Indications; unless the Genius of the Disease be first learned by the Light of Observations, which set forth the various Motions and Tendencies of Diseases.*

## VI.

'Tis by virtue of this Observation, that I am taught to abstain from Purgatives and Diureticks in the beginning of acute Diseases, and to avoid Purges in the beginning of Intermitting Fevers: That I slight all the pompous Train of Remedies in the Cure of Fevers, and make it my whole Business to mind whether the febrile Fermentation is too dull and apt to coagulate, or too ardent and dispos'd to Dissolution; by which means the Concoction and Despumation of the peccant Matter will be thwarted: That I rouse a dull Fermentation by spirituous and volatile Medicines, and on the other hand, when 'tis too high, check it with fixing and moistening Ingredients: That I persist in this Course 'till I am assured that the Feverish Blood is possess'd of as much Motion, as is requisite for a seasonable Despumation and Precipitation of the morbidick Matter, by such Passages as Nature finds convenient, viz. those of Sweat, Urine, Stool, &c. These, I say, and such

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such other Measures I observe ; not because Reason and Speculation built upon Hypotheses has suggested Advice to that Purpose ; but upon the Account that both my own Experience, and that of the most famous Observators, has taught me, That upon the exhibiting of Purgatives in the Beginning, acute Diseases are inflamed, and Intermitting Fevers turn presently continual, nay and mortal as well as tedious, if the Purges are repeated : For in the Course of Nature, I never saw a wholesome *Crisis* in the Beginning of acute Fevers : And *Hippocrates* in *Coac.* says, *Those Things which bring a Crisis must not appear immediately.* In the last Place, I pursue this Course because Experience teaches me, That the Cure of Fevers is never more happily compassed, than by keeping the Blood to its due Limits, so as to hinder it from being either too active or too supine, these being the Causes that hinder the Concoction and Despumation of the morbidick Matter. 'Tis these Experiments, I say, that put me upon the taking of such Indications in the above-mentioned Diseases.

## VII.

To contract the Matter into a narrow Compass, we must know that the Indications of Cure can't be derived from a surer Fund than from the Symptoms that rage most for the Time, and are predominant above the rest ; for those are the most open and naked Marks of the Genius and Force of the Disease. But in the mean Time, we must call to mind, that there are Four Things to be consider'd in every Disease ; namely, the Disease it self, the Cause of the Disease, the Symptoms, and the Measure of Strength : And indeed the Physician ought to be so well acquainted with the Motions, Origin, Force, and other relative Circumstances

stances of all these, that he ought to make no positive Conclusions of the Indications, till these Four be attentively weighed and collated together, and Provision be made for the most urging Symptom. I must say that no Man can be so expeditious and dextrous in detecting the Indications of Cure, as he who having the Benefit of a long Practice, has made repeated Observations upon the principal Genius of the Disease, and the various Ways of Invasion and Declension; especially if he has employ'd himself before-hand in the reading of the Authors that abound with Precepts and Cautions, such as those I recommended above. If to all these Acquisitions our Physician adds a fertile and masculine Soul, that's capable to display some uncommon Force in detecting the antecedent, concomitant, and obscure Motions of the Disease, the Motions which range very wide and succeed one another; certainly this Man will make a solid Choice of Indications.

### VIII.

The Measures I have now laid down, are chiefly conducive in those Diseases, in which all Delays are pernicious, and in which the sharp-sighted Physician qualified with long Practice, and equipp'd with a sufficient Knowledge of the Virtues of Remedies, whether specifick or common, adjusts several Things very prudently, and quickly draws the Measures of the Cure from the minutest Circumstances; all which can scarce be fathom'd by Thought, or express'd by Words. On the contrary, in Chronical Diseases, in which the *Phænomena* are more constant and long-liv'd, the most certain Source of Indications is the *Juvantia* and *Lædientia*, and a just Explication of their Effects, taken chiefly from the Dissection of those



who dye of the respective Diseases. Here, by way of Corollary, we may suggest the Reason why the most celebrated Practitioners, after the first View of the Patient, and a serious Survey of the Symptoms and Conditions of the Senses, are capable to reach the Knowledge of such Things as are almost incomprehensible, relating to the Diagnostics, Prognosticks, and Cure of Diseases; and that by such occult Ways, that if the Physician himself were put to it, he could not set forth that wonderful Quickness and Turn of Apprehension and Judgment, that serves him in finding out and adjusting these Things. For this Reason I take the Method of Cure to be nothing else but a practical, adequate, and sagacious Judgment; that is to say, I am of the Opinion that the Springs of all these wonderful and occult Things arise only from a consummate Practice, by which a Thousand Differences of Things are set in a clear Light in a Minute, notwithstanding that the signs of Diseases use to be various, uncertain, and general.

## O H A P. XI.

### *Of Specifick Remedies, and their History.*

#### S E C T. I.

**T**HERE being so great an Affinity betwixt the Remedies and the Indications, we shall never do any Thing to the Purpose in the Cure of Diseases, till those two are joined in a closer Alliance, than has been hitherto allotted them. But after all, notwithstanding that Indications without Remedies, and Remedies without Indications, are

lame Things ; yet, to speak the Truth, 'tis only the Remedies that perform the Cure : And though these Remedies may seem to be given without an Indication, yet the Event gives us sufficient Intelligence of the true Indication. This is manifest in the Practice of the Empiricks, who despising the Methods and Indications of the Rationalists, cure a great many Diseases by the Use of specifick Remedies, as they call 'em. For a Second Proof, let's consider that Remedies are as successful when exhibited by the Ignorant, upon a true, and sometimes a false Indication, as when given by the Skilful : And on the other Hand, Indications without Remedies, give no manner of Relief. 'Tis plain, therefore that *sola Remedia sanant*, the only Thing that cures is the Remedies : Upon which Consideration, we must own that our Profession wants a History of Remedies, brought to Light, not by a pleasant Luxuriancy of Thought, but by hard Labour and aged Observation ; such Remedies as are constant, fortified with the Method of Prescription, and calculated to every Disease in a specifick and almost infallible Way. Such are, the Jesuits Bark in Agues, Whey in a Dysentery, Mercury and Sarsaparilla in the Pox, the Jovial Salt or Bezoardick in the Hysterick Illness ; the Tincture of Amber extracted with Cinnamon-Water, and qualified with a small Quantity of the Syrup of Cinnamon, in Pains after Child-Birth ; the acid Spirit of *Sal Armoniac* in the Yellow-Jaundice ; and the like.

## II.

The same Measure the Historian observes in illustrating the History of Diseases, Causes, Symptoms, and Indications ; the same Measures, I say, must be observed in this History of Remedies : In going about which, we must consult the Oracles of



the Senses, and the Observations made upon the *Juvantia* or *Ladentia*, or the Event of Remedies; and draw from thence Cautions and standing Precepts, relating to the Use, Quantity, Time, and other Conditions of Remedies. To tell me that Milk is a specifick Remedy to correct the Acrimony of the Blood, will give me but little Light in the Course of Practice; unless I be likewise informed by Authors what Method, Cautions, and Precepts, I ought to observe in prescribing it; and be advised, for Instance, that 'tis safer to give Milk in Spring and Autumn, than in Summer, in which season its Whey is of good Use; that during the Use of Milk, Wine and acid Things must be avoided; that Milk is not proper while the first Passages are crouded with acid Humours; that it ought not to be exhibited in a Looseness, occasion'd by the Crudity of the Stomach; that 'tis very nocive in the Disorders of the Nerves and the Head. Pursuant to this last Caution, I was called lately to a very learned Man, that upon taking large Quantities of Milk, and avoiding all other Food, for about Twenty Days, was seiz'd with a dismal Distortion of his Mouth, accompany'd with a painful Distention of the Muscles of the Neck, and almost the whole Body. I tried several sorts of Remedies, and recover'd him in Two Months Time. Milk is an Enemy to the Head and the Nerves, 'tis friendly to the Breast, and raises Wind in the Abdomen. To prevent the souring of Milk in the Stomach, you ought to mix Sugar or Honey with it; and if it does turn soure, you must not presently reject the Use of it, but exhibit testaceous Powders for Two Days, to absorb the Acid, and then return to Milk; and if after all it still soures or curdles, you must inter-lace it with testaceous Powders now and then. After the taking of Milk you ought to sit still, or walk very gently; taking

taking Care to avoid Sleep, and the immoderate Labour either of the Body or Mind; for by such Means it rises in a crude State to the Head, and disposes it to divers Diseases. These and other Cautions you ought to know, before you exhibit Milk; Cautions that Practitioners found out, not by racking their Brains, but by a long Observation of the Events of Remedies. He who sets about the Use of Milk without such cautionary Instructions, is equally Criminal with those who chuse to walk in the Dark, without striking a Light, or staying for Day-Light.

### III.

What we have said of Milk, must be applied to all other Remedies: for the innumerable unlucky Accidents that fall out, are owing not so much to the Quality of the Remedy, as to a false Indication, or the Defect of Cautions and Precepts relating to the use of it. In Fine, the best Remedies confirm'd by the best Cautions, are all in all in the Cure of Diseases; and hence it comes to pass that sometimes Men of ordinary Learning, and e'en Quacks will baffle the ostentative Rationalist, only by Virtue of some approv'd Remedy, or some solid Caution. Purgatives are the Conquerors of many Diseases; but the imprudent Use of 'em in the beginning of acute Fevers, and the Repetition of 'em in Agues, is still in Vogue, to the great Detriment of Mankind. Not long ago an ignorant Practitioner prescrib'd a Purge in the very beginning of an Acute Fever, and omitting Bleeding, repeated the Purgation on the Seventh Day: The Patient thus reduced to a deplorable State, voided by Stool about Four Pints of clotted Blood on the 15th Day, and so turned Hectick. Now, I leave



it to the Judgment of the Wise, whether the Blood thus voided, was not an Argument that he ought to have been Blooded, and not Purged in the beginning. In *June*, 1695, a Woman at *Rome* of Forty Years of Age, that had been ill of a slow Fever, and a Scirrhus in the Stomach for a Year and a half, fell into a Dropsy upon the use of Steel that an old Physician had prescribed, and died in a Month's Time. For some Days before her Death, she had such a strangling in the Throat and Gullet, that she thought to be Choked, and could not put down any Eatables. Having opened her Corps, I found the whole Substance of the Stomach Scirrhus, and the Womb in like manner Scirrhus, with a small quantity of stinking blackish Water in the Cavity of the Abdomen. 'Twould be a tedious Task to run thro' the innumerable Instances of Damage done to Sick Persons, by the use of Remedies not guarded with due Cautions and Precepts, as that of Steel in Scirrhus's of the Ventricle, and perhaps of the other Parts, and of Purgatives in the beginning of ardent Fevers.

#### IV.

I intimated above, that every Disease depends upon a Specifick and peculiar Exaltation of the Humours, or else upon the Exaltation or Specification of the principal Disease, to which it retains; and that all these Specifications of the Humours are subject to Nature's Laws, like the other Sublunary Bodies. But I must confess I am at a loss to tell you wherein consists that Specification or minute Mixture of the morfibick Parts, that exalts every Disease to its respective Species. 'Tis possible the Succession of Ages may make such a Discovery, if so be that the wiser Practitioners apply their Meditations to Practical Things, and are not so over-fond  
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of Theory, as to neglect Practice. In the mean Time, 'tis a certain Truth, that both Chronical and Acute Diseases will be happily conquered by that Man, that either by Chance, or by a long Thread of Practice, lights upon a Remedy that's able to stifle and sink the Species of the Disease. And for a just explication of this Matter, there's no occasion to call in the first or second Qualities, as some have done; for besides that the Essence of the Disease does not consist in such Qualities, we see frequently that several Diseases are scarce moved by exhibiting of Remedies, whether hot or cold, or moist, or of the other Qualities; unless we light at last upon a Remedy that choaks the Distemper specifically. Hence it comes to pass that many Diseases, commonly call'd *Hot*, are cured by hot Remedies, cold Diseases by cold Remedies, and so on; nay, that some Diseases are cured by Remedies that according to our way of thinking, are entirely contrary to Human Nature. Thus we see a great many Sick People cured, by the greatest Errors in the way of Eating and Drinking, or by the use of such Remedies as are directly opposite to their Nature. We conclude therefore, that all these Things proceed from the above-mentioned Specification of the Humours, and not from Qualities acting in opposition to one another.

V.

This necessity of Specifick Remedies, seems chiefly to fall upon Chronical Diseases; for considering that these depend upon an Indigestion and Grossness of the Humours, and that in such Cases the Solid Parts are more frequently faulty than the Fluid, Nature worn down with the long Duration of the Illness, cannot accomplish the Concoction and Depuration of the Morbifick Matter, without  
a Re-



a Remedy be exhibited that speedily extinguishes the Morbifick Species, or Nature be corroborated by Spirituous Restoratives, and Bitterish Med'cines, so as to be exhilarated, and enabled to shake off the morbifick Yeast. Pursuant to this Thought, I have observed in the Course of my Practice, that the Modern way of prescribing Spirituous, Volatile and Active Remedies is very serviceable in Chronical, and highly prejudicial in acute Diseases: For the Fermentations of the latter being quick and over active, without any Disorder in the solid Parts, Nature, either of its own Accord, or prudently assisted by Art, performs the Concoction and Despumation of the morbifick Matter, with sufficient Quickness, and sinks the Species of the Disease by due Evacuations. But if acute Diseases derive their Origin from the occult Qualities of the Air, or a Change of Weather; there is no surer way of looking for Remedies to stifle that new Species, than the diligent and repeated Observation of what gives Ease, and what exasperates: Accordingly we see some Remedies that Cure Epidemical Diseases, are hurtful in the same Epidemical Diseases that happen in another Season of the Year.

## VI.

Now, that I am speaking of acute Diseases, I must take Notice by the bye of the grand Mistake of those, who throw in such a Crowd of Med'cines upon acute and inflammatory Diseases, till Nature not knowing where to turn her self, and variously tossed, what with the violence of the Disease, and the load of Medicines, is forc'd at last to give way, and sink under the Burden. Indeed 'tis no wonder that such is the Consequence; for acute Diseases, especially acute Fevers, are frequently cur'd of themselves, as in the Case of the Poor and the Country

Country People; by reason that the same force and impetuoufness of the Humours which raised the Fever, disposes them to a Precipitation of the Morbifick Matter at the set Time of Concoction; and this Precipitation being the Work of Nature, its Regular Motions ought not to be perplexed, and thwarted by such a frequent or immethodical Administration of Med'cines; or if it is, neither does the Fever lessen, nor the *Crisis* succeed at the appointed Time, but the Patient struggling with a doubtful Case, either dies or falls into Chronical Diseases.

## VII.

Practitioners lye under great Prejudices, as to the use of Remedies, in Acute and Chronical Diseases; some of which I shall now hint at. A great many use that long Train of Remedies, upon this Consideration, that among so many, one will certainly be found that's capable to dispel the Disease. But how stupid is this Plea? I can't forbear saying upon this Head, what *Appius Cæcus* told the People of *Rome*, when they were thinking to clap up a Peace with *Pyrrhus*; *I have bore, says he, with a great deal of Patience, my Blindness for several Years; but now I wish I were likewise Deaf, that I might not hear such base Motions, &c.* Some make Specious, but Fallacious Degrees of Med'cines, calling some great, others slight; and begin at first with what they falsely take to be the slighter Sort, arising by degrees to the Greater, if the Disease does not give Way. With this View, they prescribe, especially in dangerous Cases, first of all a Purge, then Bleeding, or *e contra*; then they inject Clysters, and exhibit Syrups, and continue to repeat all in a Circle as 'twere, till they observe that the Disease either does not decline, or grows worse; upon which they have Recourse to their great Remedies, namely,

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large Blistering-Plaisters, Scarifications, hot inflaming Applications, stronger Purgatives, and a great many such Things: And if these do not compass the End, they come at last to wait for the *Crisis*, and are not asham'd to expect a *Crisis* from Nature, after they have tortur'd her with such butchering Med'cines, and perplex'd her with such a contrary Method.

## VIII.

The Forms of Prescription must be vary'd, pursuant to the Variety of the Constitution, the Habit of the Body, Age, Country, Antecedent Causes, &c. Aperient Med'cines, for Instance, are of general Use against all Obstructions; but the way of exhibiting must be diversify'd according to the variety of Circumstances; for a Liquid Form agrees best with some, a Solid Form with others, &c. I tended lately at *Rome*, a meagre thin Man, that after a double Tertian, was mightily troubled with a slow sort of Fever, and Swellings in his Neck. His Tongue was Slimy, his Belly Costive, his Urine high Colour'd, with Watchings, &c. Upon taking a Cachectick Powder of Sulphurated Steel, Cinnamon and Sugar, he grew worse, and his Belly was distended with Wind. Upon a mature Consideration of these Symptoms, I prescrib'd Aperitives of the depurated Juices of Succory, Borrage, and Sow-Thistle, the repeated Use of which recover'd him perfectly. On the contrary, I prescrib'd the same Juices to another Patient, that was likewise Lean and Meagre, and though they carry'd off his lingering Fever, yet the continued Use of them threw him into prodigious Night-Sweats, which at last he got clear of, by discontinuing the Use of the Juices.

## IX.

'Tis in vain to strut and spurn in Defiance of the Power of Death, or to repulse the Violence of Diseases with the Awe of Disputes. *Sola Remedia Savant* : Whereever the Science is weak, 'tis only Remedies that keep up its Majesty and Weight. I take it, therefore, nothing can be more conducive to the Health of Mankind, than Physicians their applying themselves to make daily Discoveries of new Remedies, or guard more effectually these we know already, with solid Precepts built upon Observation. A Phthifick arising from an Ulcer in the Lungs, is commonly branded as incurable, upon the Plea that the Ulcer is internal and occult, and cannot be cleansed like other external Ulcers. But why do they not make it their Business to find out the true Situation of the Ulcer, and make an Incision accordingly between the Ribs, to the end that proper Remedies may be conveyed to it? For my Part, I know no Reason why that should lie neglected. About Seven Years ago, when I was at *Padua*, a Man received a Wound in the Right Side of his Breast, that reached to the Lungs; and employing an able Surgeon, had an Incision made between the Ribs to the Length of Six Fingers Breadth, in order to discover the Situation of the Wound in the Lungs; which was perfectly cured in Two Months Time with Vulneraries apply'd with Tents and with Syringing. Now Practitioners ought to use the same Piece of Diligence in Curing a Phthifical Ulcer in the Lungs, lest the Scroll of incurable Diseases should grow too long, to the infinite Disgrace of the Profession. Believe me, Gentlemen, assiduous Thought and Use improves and whets the Mind; but Sloth and Despair breaks its Edge.



## X.

If in any Case, certainly in the Practice of Physick we ought to know much and do but little, especially in curing very acute or complicated Diseases; and to stifle that fatal Prejudice of some Patients, who fancy that Diseases are never well cured, but by great and numerous Remedies, and either despise or distrust simple and cheap Prescriptions. Oh! the Ignorance of the Vulgar! How many Men worn out with the long Tyranny of Diseases, and the frustraneous Use of Remedies, have at last, by committing themselves to Nature, quickly recover'd a healthy Countenance and a free Respiration? How many have been cured by Negligence or Indulgency, who had otherwise fallen a Sacrifice to the Hands of the Learned? History is Evidence of the firm Health of the first Inhabitants of the World, who neither consulted nor courted the Professors of our Art. Let me therefore conjure at once the Ignorant Vulgar, and the Froward Physician, to contract these Forms of Remedies; for oftentimes the Repose of the Bed, retiring from Business, and even an Abstinence from Remedies, cuts the Sinews of the Distemper, that the frustraneous Use of Remedies would have inflamed.

## XI.

Our Historian's remaining Task is to enquire how the Remedies operate upon us: But in regard this is a very deep Point, and lies at the remotest Distance from the Senses, 'tis the Business not of one Man, but of a whole Society of Physicians: For to illustrate that Subject, there's a Necessity of taking in many Things from Chymistry, from the Mechanicks, from Anatomy, the Principles of natural

tural and experimental Philosophy, &c. I own indeed, that upon the repeated Meditation and Experience of Physicians, the Effects of some Remedies are at this Day better known to us, than they were in former Times to the Ancients: And 'tis to be wished we could say the same of all. But such is the Difficulty of this Enquiry, that Nature does with Remedies, what a Fellow in a Ditch does with a Board that's reach'd him by his Companions; for in order to get out, he lays the Board sometimes to the Right, sometimes to the Left; one while he lays it under his Feet, and another while sets it against the Wall, and so chops and shifts about till he gets out. When we exhibit a Remedy, Nature does so turn it about, as to make use of it sometimes in raising drooping Fermentations, in separating the Nocive, depressing the Volatile, and disentangling the tenacious Humours; and thus by a secret Art, best known to its self, it disposes the Remedy so as to answer its various Indications.

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C H A P. XII.

*A Centaur, or a View of the Paradoxes of Modern Physicians in deriding Crisis's, Critical Days, &c.*

S E C T. I.

**A**Mong the other Abuses that have crept into Physick within these few Years, we can't but take Notice of the Derision of *Crisis's*, of Critical Days, of the Motion of Diseases by odd and even Days, and such other Observations as were made by the ancient Family of Physick, to the unspeakable Benefit of Mankind. Now there are Two Things that tempt our Upstarts to condemn this



Sedulity of the Ancients. One is the Prepossession occasion'd by the Books that come out now-adays in Shoals, in Opposition to the Wisdom of the Ancients. The Mind of the Reader being once tainted with that Leaven, takes all the ancient Positions to be false; or out of Complaisance to the Genius of the Age, derides 'em most filthily. The Second is the common way of curing Fevers, which being speculative, fallacious, and various in Pursuance of the Variety of *Hypotheses*, can't but oppose or disturb Motions of Nature in the Production of a *Crisis*, and so the critical Motions of Nature not answering Expectation, the whole Doctrine is branded for an idle Whim. But to speak to the Purpose, and to retrieve the ancient Splendor of this Doctrine, which is the chief Foundation of the Cure of Fevers: The Deriders themselves acknowledge that the Blood is a fermenting Liquor, and when feverish, or otherwise disorder'd, is subject to the same Rules of Crudity, Ebullition, and Depuration, with other fermentable Liquors. Now, in these Liquors, Nature has established a Law, that each of them shall accomplish the Motions of their Fermentation and Depuration in a determin'd space of Time; and we find that this Law is exactly observ'd: For the Time that Stum spends in performing its Depuration, is different from that requir'd by Ale, Cyder, and other Liquors. The same Remark holds in Fruit, each of which comes to their Maturation in a determin'd Number of Days; and 'tis in vain to offer any Artifice to make Fruit, or other fermentable Liquors, accomplish their Maturation before the set Time of Nature; for such Violence makes 'em corrupt, rather than ripen.

## II.

Since the Feverish Blood agrees with other fermenting Liquors in several Circumstances, I see no Reason

Reason it should not likewise agree in performing the Depuration and Concoction of the peccant Matter, in a set Interval of Days or Months: Especially considering that *Hippocrates* and Experience are Evidence that simple Tertians go off of themselves in Seven Rounds, an *Ephemera* in 24 Hours, a *Synocha* in Four Days, the particular Fits of Fevers in a set Measure of Hours, and so on. Nay, so constant is the Order of Nature in accomplishing the Concoction and Depuration of the peccant Humours in a set Measure of Time, that some Fevers hold out against all Med'cines whatsoever, 'till such Time as the Space allotted by Nature for the Despumation is over; nay, the unseasonable and indiscreet Exhibition of Purges, Febrifuga, &c. not only exasperates or duplicates the Disease, but likewise paves the way to Death, by vertue of the great Confusion and Hurricane it occasions in the Humours, in thwarting the regular Motions of Nature. This Remark I have made frequently in acute and Intermitting Fevers.

### III.

This Purgation of the feverish Blood at a set time, is called a *Crisis*, as being a solemn Effort of Nature, by which, after passing the Rounds of Crudity and Ebullition, the peccant Matter is expell'd. In the Country, and where Physicians are not employ'd, we meet with a pleasurable Instruction, in seeing these *Crises* or Despumations of the peccant Matter perform'd by the way of Sweating, of a Looseness, of Urine, and such other natural ways, and finish'd with a regular and orderly Motion. *Hippocrates*, and his Countrymen the *Grecians*, being aware of all this, did so religiously observe these Motions of purging Nature, that in the Cure of Fevers they prescrib'd



but few Remedies, for fear the unseasonable Use of 'em should disturb the Government of the internal Sovereign. In the Cure of Fevers, particularly those call'd Acute, *Hippocrates* us'd but very few Remedies; and abating for a gentle Vomit, Clysters, or the like, which he was forc'd to give in the Beginning, he us'd nothing in the Progress of the Disease, but only a Ptisane variously contriv'd according to the Genius of the Disease; and leaving the rest to Nature, expected a *Crisis* with Patience and Watchfulness; as it appears from his Book *de Diata acut.*

## IV.

'Tis no Wonder that *Crisis*'s do not succeed now-a-days either so frequently or so perfectly, as they did of old in *Greece*; since Physicians either not knowing, or disproving the *Grecian* Measures, murder their Patients, in a manner, by prescribing from the Beginning to the Declension of the Disease Purgatives, Diaphoreticks, Bleeding, and spirituous Remedies; and acting both imprudently and unseasonably in their other Measures; inso-much that the Humours thus distracted by the divers seditious Motions of Remedies, can't possibly compass a critical Despumation at the Time appointed; but being toss'd in eternal Confusion, terminate in præternatural Translations instead of a perfect *Crisis*; so that the Rules handed down to us by the Ancients, with reference to *Crisis*'s, Critical Days, and the other Motions of Nature, are not observ'd in the Course of Fevers. But 'tis alledg'd that evacuating Med'cines are necessary in the Beginning, to the end that part of the peccant Matter being thus carry'd off, the Disease may be thereby weakned, and Nature may apply it self more strenuously to the Concoction of the rest.

This

This Observation goes against Experience, in regard that Evacuations perform'd in the Beginning, and while the Disease is yet crude, are frequently suspected and dangerous, and are unconcluding *Crisis's*, as *Hippocrates* says; for they are so far from impairing either the Disease or its Symptoms, that they serve to exasperate 'em; it being not the due Separation of Nature, but the Force of Irritation that gives rise to the Evacuation. Since Nature therefore never moves crude Matter in the beginning of Diseases, or while it is yet blended with good Juices, doubtless such an Attempt is very unbecoming in Art, the Interpreter and Minister of Nature. When any Physician, either thro' Ignorance, or from Spite to an opposite Sect, makes such an Attempt, the stronger the Purgatives, Diaphoreticks, or other Med'cines are, the greater Confusion will ensue in the Humours; and for that Reason, such Med'cines will make but a small Evacuation; or if it be large, 'twill tend to the Detriment of the Patient by inflaming the Symptoms, and either prolonging or adding a mortal Sting to the Distemper. On the other hand, if the same Med'cines are given, though in a small Quantity, towards the End of the Concoction, they make not only a copious Evacuation, but such as pacifies the Symptoms, and eases the Patient. But after all, I must confess there are some Fevers in which the peccant Matter ought to be expell'd by Sweating, or other more natural Ways, without staying for a Concoction; by reason of a concomitant Malignity that disposes the Blood to a fatal Coagulation, and accelerates Death by staying longer in the Humours; or by reason of their being produc'd by bad Food, or such other Causes. In this Class we reckon your epidemical, contagious, and malignant Fevers; in which all Delays are pernicious, upon the account



that they are wont to carry off the Patient very speedily. Some will tell you that Purgatives are necessary in the Beginning, in order to dislodge the Crudities of the first Passages amass'd by over-feeding, and furnishing Matter for the Disease to work upon. But be it known to these Gentlemen, that the Crudities of the first Passages digest of their own Accord, or rather are concocted by the exhibiting of stomachick Med'cines, and such as whet and corroborate the digestive Force of the Ferments; and not by the imprudent Use of Catharticks, which convey them more effectually into the Mass of Blood, and either heighten or feed the Distemper: So that even in this Case, Purgatives are improper in the Beginning.

## V.

Though the Order of Nature in bringing about the Effects of Things is constant and perpetual, yet it uses to be so thwarted by Opposition, that its Method varies in Pursuance of the Variety of the Obstacles it meets with. This Truth is verifi'd to a signal Degree, in the Case of *Crisis's*; for in travelling over *Italy* and *Dalmatia*, and making close Remarks upon this Head, I learn'd that tho' *Crisis's* are the constant Motions of Nature, yet they vary in Proportion to the Variety of the Method of Cure, the Season of the Year, the Country, Way of Living, Constitution and Age of the Patients, &c. In Winter, both the Chilness of the Air, and the Use of grosser Food, have that Influence upon the vital Juices of the Body, that in that Season they are somewhat ropy and unqualify'd for quick Motion; the Mass of Blood being at the same Time crowded with Impurities, by reason of a scanty Transpiration. Now, the Fevers which happen in this Season of the Year, and

and while the Blood is thus dispos'd, require a long Interval of Time for accomplishing the Despumation of a perfect *Crisis*; nay, the above-mention'd Crowd of gross and heterogeneous Particles, puts the Humours into a mighty Confusion; insomuch, that they can hardly reach the regular Despumations of Nature. In that Season Fevers are likewise less acute, and less ready for a speedy Despumation, than they are in Summer. For the same Reason we find, that in the Fenny and Northern Countries perfect *Crisis*'s are seldom met with; according to the Attestation of the *Germans*, and of the Physicians of other cold Countries. Now, in such Cases, we must have Recourse to Med'cines that have some Heat in 'em; to digestive and corroborating Med'cines, which exhilarate Nature, so as to excite such a Motion in the Blood, as is requisite for going thro' the Depuration perfectly, and at the set Time. In Spring and Summer, we find, that the Poor and the Country People, who seldom trouble Physicians, are cur'd in a few Days of acute and inflammatory Diseases, by Virtue of a healthful *Crisis* made by Sweat, Urine, or Stool; and that without any other Remedies but Bleeding, (if there be Occasion) a thin Diet, and diluting Ingredients, calculated to the Heighth of the Distemper. For the elastick Force of the Air, and consequently the insensible Transpiration, being increas'd in Spring and Summer, the Humours are thereby render'd more nimble and pure; so that the morbidick Dross that is blended and boil'd up with them, is sooner disengag'd, concocted, and expell'd by subsequent *Crisis*'s. The same Parallel will hold between hot and cold Countries, a hot youthful Constitution, and a moist aged Temperament, &c.



## VI.

For the same Reasons, the *Crisis's* were regular in ancient Times, in *Greece* and *Asia* ; for the Air of those Countries lying to the *Eastward*, and being very pure and thin, not only the Vines and the other Fruits of the Earth come to a speedy Maturation, but even the Mass of Blood, untainted with gross and impure Particles from the Air, and possess'd of a notable Agility and Purity, is sooner clear'd by the natural *Crisis's* of the morbidick Particles, that raise it to a febrile Effervescence, than it could be in a gross, marshy, and cold Air : So that the Heat of the Climate, and Season of the Year, and the Thinness and Purity of the Air, are an Argument of quick and perfect *Crisis's* in acute Diseases. But all these Advantages will be of no Use, unless we follow the Method of *Hippocrates* ; who being taught by long Experience, that Nature is the best Curer of Diseases, especially such as are acute, prescrib'd but very few Remedies in the Beginning of such Disorders ; and when the Distemper tended towards the Height, laid all Remedies aside, (provided the Genius and Malignity of the Disease allow'd it) and leaving all to Nature, waited securely for a *Crisis* : But our modern Practitioners, either forgetting or contemning such Precepts, not only fatigue the Patient with repeated Forms of Remedies during the whole Period of the febrile Accension, but turn the Disease, that of it self is favourable and mild, into a chronical and mortal Illness.

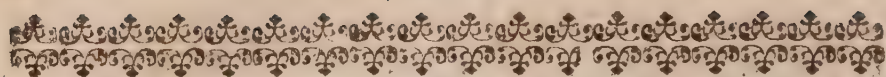
## VII.

I may safely say, without infringing upon the Measures of Modesty, that I have oftentimes cur'd inflammatory Fevers, especially those which accompany

company the Small-Pox, by Bleeding, and a thin Diet, with a prudent and seasonable Use of diluting Med'cines : And when I pursu'd this Method, I never had a Patient ill of the Small-Pox, that dy'd under my Hands. In mentioning Bleeding as Part of the Cure of the Small-Pox, I only meant, that I use it when the overbearing Heat of the Fever, the Impulse of the Humours upon the Head, or other *Viscera*, and such like Symptoms do require it. I observe the same Method in the other continual and acute Diseases ; for in the Beginning of such Disorders, I prescribe such Remedies as are sufficient to keep the boiling Blood within the due Bounds of Fermentation ; But when the Disease moves towards the Heighth, I look on with Attention, and leave the rest to Nature, depending upon it for Advice, as to what Course I must steer, in expelling the concocted and divorc'd peccant Humour. You can't imagine what Pleasure I have had, after the Pursuit of this Method, in seeing the febrile Fits succeed by gentle and friendly Turns, and run their Rounds in the appointed Order of Nature ; in seeing the feverish Ebullition carry'd on in a natural Order, without the Perplexity of furious Symptoms, or the unseasonable Commotions of Remedies ; in seeing the regular and finish'd Course of the *Crisis*'s or Depurations of each Fit, as well as the general Despumation at the End of the Disease : But, on the other hand, when Nature was teaz'd and thwarted with the continual Use of Remedies, I always observ'd that every Thing grew worse and worse.

*The End of the Second Book.*





A  
 DISSERTATION  
 OF THE  
 Anatomy, Bitings,  
 AND  
 Other Effects of the venemous  
 Spider, call'd, TARANTULA.

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*The P R E F A C E to the Reader.*

*A*LL the Authors that writ of the Tarantula, have either gone upon Hearsay, or coin'd several Things at Pleasure. None of 'em ever was in Apulia, (alias Puglia) where that Creature chiefly displays its Venom ; abating for Epiphanius Ferdinandus, an Apulian, that added to his practical Observations some Histories of Persons bit with the Tarantula. This Province being therefore untouch'd, or only made known by some general and confus'd Hints, I chearfully took up a Resolution, Two Years ago, of writing upon the Subject ; to which I was much encourag'd by the ear-

*nest Desire of Joh. Jacobus Mangetus. a noted Practitioner of Switzerland ; who acquainted me, by very civil Letters, that a just Account of that Matter would give great Light into the History of Insects, and the general Nature of Poisons ; and withal, that if I would undertake it, he would put it into his Bibliotheca Medico-Practica. In Compliance with the Request of my Learned Friend, and with a Design to gratify the Republick of Letters, I then writ an undigested and confus'd Account ; which now, upon mature Consideration, is presented to the Reader in a more regular and methodical Order, with large Additions. Here you will find, that in Pursuance of my wonted Custom, I keep close to Observation and Practice, and always allow them the Preference. If you find that sometimes I grovel on the Ground, and do not aspire to much Reasoning, in treating of the Effects of the Tarantula, and the Remedies that cure its Poyson ; impute it to my natural Timorousness, which makes me always very cautious of cutting the right Thread of Nature, by unlearned or unjust Ratiocination ; that having occasion'd many Errors in the Way of Physick, as it appears from those Authors who fall in with that Prejudice. After a due Survey of the Nature of the Poison of the Tarantula, and its Analogy with other Diseases, I take in a great many Things relating to the Mechanical Doctrine of Musick, Poison, and Dancing. I have likewise given a short Account of the Discoveries made upon the Eggs of Oysters, and the genuine Nature of the Serpentine-Stone, call'd Cobra de Capelo, which is cry'd up for extracting Poison. In fine, whatever I have said upon these Heads, I submit to the Judgment of the Learned.*

Rome, Nov. 13.  
1693.

C H A P.



## C H A P. I.

*The Etymology of the Name, and the several Sorts of Tarantula's.*

**A** *Tarantula* is a venomous Spider, so call'd from *Tarentum*, an ancient City of *Magna Græcia*, upon the *Ionian Sea*. Those who are once bit by it, are never quite cur'd of the *Venom*; for it revives every Year, and occasions a long Series of Evils, which would be very annoying to the Patients, if they did not take due Care of their Health by Dancing and Balls. This Animal is call'd *Tarantula*; not that 'tis more virulent at *Tarentum* than in the other Countries of *Apulia*; but, perhaps, because in the Time of the *Grecians* and *Romans*, that City was more noted and more frequented than the rest; so that the Instances of Persons bit by this Spider, were more numerous there than elsewhere; and thereupon the Animal derived its Name from the City. The Name of *Araneus*, or *Spider*, is common to the *Phalangium*, the *Tarantula*, and the *Tetragnathus*. *Pliny* reckons up Eight Species of Spiders, *Lib. 29. Cap. 24.* *Avicennas* Twelve, *Lib. 4. Sen. 5. Tract. 5. Cap. 5.* and Four more, *Cap. 9, 10, and 11.* But upon this Head you ought to consult *Aldrovandus*, the Learned *Lyster*, and the other approved Authors. As for my Part, I chuse for Clearness Sake to divide Spiders into the *Oſonoculi*, or those of Eight Eyes, and the *Binoculi*, or those of Two; which differ from one another in Magnitude, Substance, Colour, Feet, Stings, the Number of their Eyes, &c.

The *Tarantula* is a Species of the *Oſonoculi*, and of this I mean to give a ſhort but curious Deſcription. 'Tis true, ſuch a Hiſtory may ſeem to be of ſmall Importance to the Practice of Phyſick, as being confin'd to the Inhabitants of *Puglia*; but at the ſame Time it affords great Light to the difficult Province of venomous Diſeaſes: For a due Parallel between the Symptoms of the *Tarantula* Poyſon and thoſe of other Sorts of Venom, will furniſh us with a more ſolid *Diagnofis*, *Prognofis*, and Cure of Diſeaſes. Tho' a *Hydrophobia* be the Effect of the Venom of a Dog, yet *Borellus* obſerves, *Cent. 3. Obſ. 38.* That he met with it in a Man that had never been bit; it being produc'd by a peculiar Exaltation of the Humours, and much of a Piece with the Madneſs occaſion'd by the Bite of a Dog. *Salmuth*, in like manner, obſerv'd it in a malignant Fever, without any previous Bite, and branded it for a Harbinger of Death; *Cent. 2. Obſ. 52.* Among the Ancients, *Cælius Aurelianus* deſcribes an *Hydrophobia*, that came of it ſelf. Now, to apply the *Simile*, the Venom of the *Tarantula* is accompany'd with ſome Symptoms, which bear a near Reſemblance to the Symptoms of Melancholy, the Green-Sickneſs, and other Diſeaſes. Tho' Madneſs is a quite different Diſeaſe from a *Hydrophobia*, or an Abhorrence of Liquids, yet oftentimes 'tis ſucceſſfully cur'd by the repeated Immerſion of the Patient in Water, as we are wont to do with the *Hydrophobi*: And this is confirm'd by the Experience of a very famous Phyſician of *England*, as we are inform'd by *Helmont junior*, in his *Tract. de Homine*, §. 29. f. 33.



## C H A P. II.

*Of the Nature and Situation of those Countries  
in which the Tarantula is bred.*

**T**Hat Country which is now known by the Name of *Apulia*, was call'd by the ancient *Gracians Magna Gracia*, and by a general Name *Japygia*. They subdivided it into *Daunia*, *Peucetia*, and *Messapia*; from *Daunius*, *Peucetius*, and *Japygius*, the Sons of *Lycaon*, that in ancient Times govern'd *Apulia*. The modern Name of *Daunia* is *Capitanata*, which is wash'd by Three Rivers, namely, the *Frento*, the *Cerbalo*, and the *Offanto*. Upon the right Bank of the last, we still observe some Rubbish of the famous *Canna*; at which was fought that celebrated Battel between the *Carthaginians* and the *Romans*, that had almost prov'd fatal to the latter. The ancient *Peucetia* is now call'd the Province of *Bari*; as the ancient *Messapia* goes by the Name of *Lecce*. These Three Provinces make one continued Plain, abating for the Mountain *Garganus* in *Daunia*. Upon this Mountain we gather the officinal purging *Manna*, which is commonly call'd *Mountain-Manna*. It produces likewise several noted Medicinal Herbs, which all the Apothecaries of *Italy* make choice of, as being the more active and penetrating. From the River *Offanto*, to the *Capo di S. Maria di Leuca*, we have a wonderful Plain, comprehending the Provinces of *Bari* and *Lecce*, and extending to One Hundred and twenty Miles, with no Rivers, and but very few Rivulets, insomuch that

that the Country is very much parch'd in the Summer.

The above-mention'd *Apulia* lies *Eastward*, and stands expos'd to the *East* and *Northerly* Winds. In Summer its Showers are very unfrequent, and in a word, *Apulia* is expos'd to the scorching Beams of the Sun, by virtue both of the Dryness of the Soil, and of its Vicinity to the *East*; and the Inhabitants breath in an Air that feels as if it came from a burning Oven. But at *Lecce*, and upon the adjacent Shores there comes usually a little before or after Noon, a *Westerly* Breeze from the *Adriatick*; which mitigates, in some Measure, the scorching Heat of the Sun. This Temperament of the Climate, is match'd by that of the Inhabitants; for, generally speaking, they are of a hot, scorch'd Constitution, with black Hair, and a brownish or palish Skin, meagre, impatient, peevish, watchful, very quick in their Way of Apprehension, nimble in Reasoning, and extream Active. They are very subject to ardent Fevers, Frenzies, Pleurifies, Madness, and other inflammatory Diseases. Nay, the Heat is so excessive in that Country, that I have seen several of the Inhabitants urg'd by it to the last Degree of Impatience and Madness.

Notwithstanding the above-mention'd Inconveniencies, *Apulia* is inferior to no Country in *Italy*, for the incredible Fertility of the Soil; for the Healthiness of a pure, dry, and free Air, that is not tainted with the Foulness of stagnating Water; for the pleasant Prospect of the Sea, and an Affluence of Fish, and all Sorts of Meat. To be plain, in all my Travels thro' *Italy*, *Dalmatia*, &c. I never met with better scented and better tasted Fruit than in *Apulia*. All their Wines almost are  
black,



black, but withal so fragrant and powerful, that they would serve better for a vulnerary Balsam, than an Entertainment at Table. The Province of *Bari* produces great Plenty of Wheat and Almonds, upon which 'tis call'd the great Barn of *Italy* and the adjacent Countries. The Province of *Lecce* abounds with Oil, Wine, and Wheat; and the Oil of this Country being reckon'd the best Oil in *Italy*, is exported to all Foreign Countries. The Plane, the Poplar, and the other shady Trees that are chiefly valued for Pleasure, and Refreshment, are very uncommon in *Apulia*. The manur'd Fields are plentifully stock'd with Olives, Vines, and Wheat; as the unmanur'd are with Rosemary, Sage, Penny-Royal, and Thyme, the common Pasturage of the Animals of that Country.

Now such is the Temperament of the Climate, Soil, and Inhabitants of this Country, a Geographical Description of which you have in the first Figure of the annex'd Cut, and in which the *Tarantula* breeds; being a little Animal impatient of Cold, that keeps under Ground in Winter, during which Time it takes no manner of Food. About ten Years ago, when I was at *Naples*, I shut up several of them in a Vial half full of Earth, immediately upon their coming from *Apulia*, and found that they lived for above a Month without Food.

Tho' this Insect infests Men and other Animals, yet 'tis more infested it self by a little Creature not unlike a Wasp, with a streak'd party-colour'd Back, and a blackish Belly; which greedily hunts, kills, and feeds upon *Tarantula's*, and the other Sorts of Spiders. But, what is yet more wonderful, the *Tarantula's* are so hostile one to another, that if you put ten of them in one Vessel, they'll

kill one another 'till only one survives the rest; nay, if you shut but two up in any one Vessel, the one kills and eats the other in a very short Time.

In Winter they lie close in their Dens, and in Summer they straggle out and haunt the open Fields, where they lie in wait for Travellers. When the Peasants have a mind to catch 'em, they come to their Holes, and, with a small Reed, imitate the murmuring, buzzing Noise of Flies; upon which the *Tarantula* comes forth in quest of the Flies or Bees thus counterfeited, and falls into the Snare. They have likewise a way of taking them with a small Switch; for upon wagging the Switch, so as to make an agreeable Hissing, and holding the End of it to the Mouth of the Hole, they come out and crawl up the Wand.

### C H A P. III.

#### *The Anatomy of the Tarantula.*

**A** *Tarantula* is a Sort of Spider, or *Phalangium*, an accurate Description of which you have in the Second and Third Figures of the annex'd Cut. It has Eight Feet, Four on each side; and each Foot has Three Knots, or Joints. The Two Fore-feet are less than the other Six: And this Diversity of the Magnitude of Feet is common to most Spiders; for sometimes the Fore, and  
some-



Sometimes the Hind Feet are the longest ; and this, I take it, is so contriv'd by the Almighty Architect, both to favour their Agility, and to qualify 'em for the convenient Weaving of various Webs.

An *Apulian Tarantula* is equal in Bulk, or rather bigger than a Walnut ; its Magnitude is much the same with the Draught of the Second and Third Figure. Its Body is divided into Two principal Parts, namely, the Breast and the Belly ; which seem to be disjoin'd the one from the other, but in Effect are join'd by a slender Ligament, or little Knot. The Head is not sever'd from the Breast and Shoulders, as being a Continuation of the same. The first Thing we meet with in the Head is a Bone, from which there grows out Two Webs, like a hooked Pair of Tongs or Pincers ; (*aa*) the Point of which is very sharp, and by that means they pierce the Skin very readily, like Two Spouts of Poison. The Substance of these Webs is crusty and friable ; and in the Male *Tarantula*'s, they are firmer and sharper than in the Female. These Pincers you may see accurately delineated in the *Micrographia* of *Philip Bonanni*, the Jesuit, whose History of the *Vatican* will be speedily publish'd. Next to the Webs, or Tongs, we meet with Two little Horns, (*bb*) which take their Rise not far from the Webs, and have Two Joints : The outermost Point of these is sharper and smaller in the Females than in the Males, as you may see in the Cut. These Horns they move continually, and forcibly ; especially when they approach to their Prey.

They

They have eight Eyes in their Head, which is likewise observed in all the *Phalangia* and larger Spiders that weave Webs, as well as our *Tarantula*: But the *Binoculi*, or those which have but two Eyes, weave no Webs that we know of, and differ from the *Odonoculi* in Magnitude, Figure, Substance, Proportion of Limbs, &c. Their Eyes are smooth and bright, and free of the little Risings observ'd in other Insects. Four of these Eyes are bigger than the other; that is, there are two on each Side of the Head, which are easily perceiv'd without the Help of a Microscope. The other four are lesser; they lie in a parallel Line under the former, and are scarce perceivable without a Microscope. All these are to be seen in the annex'd Figures. Their Eyes are sometimes black, and sometimes blewish. In the mean time I am at a loss to tell you, what Motive induced the Almighty Architect to allot such a Multiplicity of Eyes to the *Tarantula*, and the other weaving Spiders, unless it be that the Plurality of Eyes facilitates the weaving Part; for, as I intimated already, those which do not weave have but two Eyes.

The Eight-ey'd Spiders have a Belly that's divided by a great Incision from the Breast, and their *Anus* shews some Risings or Appendages, which send forth the Threads of which the Webs are weav'd. The *Tarantula* is a hairy Animal, and the Hair rises very observably all over the Body. The external Colour of the Body is various, for some are of a Quail Colour, others of an ashy or whitish, and others again of a blackish flea-like Colour; nay, some have Spots and Stars here and there. Those of a quail or a whitish Colour, have a round Belly and a little Mouth; but the spotted have a sharper Back. Their Skin is soft; in the Males 'tis harder than in the Females, only it does not go the Length of a crusty Substance.



I wave the Viscera of the *Tarantula*, upon the Consideration that their friable and soft Substance renders the minute Structure unperceivable: But I have a strong mind, some time or other, to put 'em into some stiptick Water, that so their Parts being consolidated may bear the Knife. *Hoochius* in his *Micrograph. Obs.* 47. affirms of the long-footed Spider, that it resembles a Sea-Crab, and that its inward Parts will be found not unlike those of the Sea-Crab, if their brittle Substance did but allow of Dissection. Among the inward Viscera we may reckon the Receptacles of the Threads, such as the *Italians* have lately discover'd in the Silk-Worms, and of which the Learned *Rhedi* discourses at large in his Book *de Gener. Insect.* where he likewise advances many curious and remarkable Things of the Spider's Thread. Here I must observe by the by, that the Eight-ey'd Spiders void none but liquid Excrements; whereas those of the Two-ey'd are always solid, notwithstanding that both of 'em feed equally on Flies, and such other Insects.

#### C H A P. IV.

*A Description of the Seed-Vessels, the Egg, and the Generation of the Tarantula: With some occasional Remarks on the Eggs of Oysters, and on Seed in general.*

THE *Tarantula* takes its Origin from an Egg, and propagates its Species by the same Means, as well as all other Animals. Their Species consists of Male and Female that couple together, and are endow'd with proportional seminal Vessels;

Vessels ; that is, the Female is provided with an *Ovarium*, and the Male with such Organs as prepare a prolifick Spirit, and even with a Pizzle, which rises from the Seam that joins the Breast and the Belly, and has a blackish Colour with a wreath'd Form, not unlike the Sting of a Fly, as the excellent *Marcus Aurelius Severinus* has well observ'd in his *Zootomia*.

These Males are less than the Females, and of a drier Structure, as you may see from the annex'd Figures ; and the Females have longer and nimbler Feet, all the other Parts of the Structure being of the same Proportion in both.

The Animals couple near the Beginning of June, at which time most Animals are proud with prolifick Seed. *Aristotle* in his *Hist. Animal. lib. 5. cap. 8.* says of the Spiders, That when the Female Spider has drawn out the Cobweb, the Male does the same ; and after a Repetition of such mutual Services, they couple together Back to Back ; this way of Copulation being most convenient for them, by reason of the orbicular Form of their Bellies. But for my part I freely own, that Observation has not yet inform'd me whether they couple thus backwards, or Face to Face. If we dissect a *Tarantula* with young, we find in it an *Ovarium* compos'd of little Bladders full of little Eggs. These Eggs begin to be fecundated in the Beginning of Summer, at which time the Belly of the *Tarantula* swells, as you see in the third Figure, (for the second Figure represents a Male.) A few Days after the Impregnation, it brings forth or lays a Bladder full of little Eggs, such as you see delineated in Figure 4.

This Bladder or Cluster of little Eggs is of a Sky-Colour, which distinguishes it from the *Ovarium* of Shell-fish, the Colour of which is yellowish and shining. The *Tarantula* having thus laid



the Bladder, embraces it very close, as you see in *Fig. 3.* and continues so to do for 12, 15, or 20 Days; after which it leaves it in the Fields, where the further Operation of the Sun brings the Eggs to such a State of Maturity, as is requisite for their breaking forth. It lays its Eggs after the same manner with the other Spiders, and its Bag lies near the Fundament; which *Aldrovandus* has likewise observ'd in his Book *de Insect.* fol. 625. *I observ'd (says he) in the Belly of a Spider a great Heap of Eggs, as small as Atoms, which were white, and gave a Crack when I press'd 'em with my Finger.*

A *Tarantula* is not impregnated till 'tis a Year or two old, at which time 'tis reckon'd to be of a Bigness proper for Generation. In the time of Copulation and Impregnation, the Male and Female are very fond of one another, and thus they continue till the Female is just ready to lay; upon which the Male leaves her, notwithstanding that she lays several Bladders of Eggs all the Summer long.

This Bladder of Eggs resembles, in Figure and Magnitude, a Lupine; as you see it represented, *Fig. 4.* If you cut it up thro' the Middle, you'll find within it a vast Quantity of little Eggs, sometimes Hundreds and above. See *Fig. 5.* These little Eggs are rang'd in a regular Order, and mutually join'd by thin flaggy Threads, or rather by a peculiar Sort of Slime. One of these Eggs apart is as big as a Millet-Seed, and sometimes as a White Poppy-Seed. They are every way round, and their outer Membrane is very thin and friable; in the Cavity of which are contained the first Threads of the Spiders, which the further Influence of the Sun quickly brings to Light. From the first laying of the Eggs to the perfect Exclusion, there's an Interval of several Days; sometimes twenty, and sometimes thirty, in the parch'd

parch'd Soil of *Apulia*, less or more, according as the *Tarantula* frequents the Plain, or the mountainous Parts of the Country.

Now, that I am speaking of the Eggs of Insects, 'twill not be improper to put in a few Remarks of the Eggs of Oysters, the Propagation of which is so little known among Philosophers. Last *May* I made my Remarks on some Oysters brought alive from *Naples* to *Rome*; and in viewing with a Microscope the Milk that floats in their Cavity, I found it to be nothing else but a Collection of very little Eggs, or of the minutest Oysters swimming confusedly in a slimy or resinous Sort of Juice. If you spread this Milk upon a Glass, and hold it before a strong Light, you'll observe with a Microscope a Sort of swinging Motion, and a wandring Progress of the Parts of the Milk, as if such Progressions were the first Rudiments of Motion of the future Animal. Modesty will not suffer me to take notice of the very lively Motions, that a famous Physician of *Italy* has observed in the Seed of other Animals.

Milk new drawn from a She-Goat, and spread upon a Glass, represents under a Microscope an infinite Quantity of very minute Globules, or little Balls, that move nimbly to and again; nay, I've observ'd this nimble Motion in these Globules two or three Days after 'twas milk'd, provided the Milk was not turn'd or corrupted: And if you add a little Water to the Milk, you will find the Motion yet more manifest. These Remarks I made with a Microscope of three Glasses, which was so contriv'd, as to have the thing to be view'd plac'd conveniently against the Light, and consequently survey'd with more Accuracy and Niceness.

To return to the Milk of Oysters: I say, this Milk is nothing but a Collection of an infinite Number of little Eggs or Oysters, swimming confusedly



fusedly in a slimy or resinous Sort of Liquor. But I cannot guess at the Use of this whitish and slimy Glue interspers'd among the Eggs, unless it be that the Author of Nature designed not only a quicker Maturation of the tender Brood of the Oysters, by vertue of a gentle and balsamick Moisture, but likewise a firmer Adhesion of the same to the Rocks, when put forth by the Mother ; to the end that they might be able to withstand the Shocks of the Wind and the Sea, and attain to a due Growth by vertue of the Firmness thus procur'd.

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## C H A P. V.

### *Of the Bitings of the Tarantula.*

**T**HE *Tarantula* is not venomous in every Country, nor in every Season of the Year, but only in *Apulia*, and that in Summer, especially about the *Dog-Days*. The Sting of it is not offensive in Winter ; and, which is strange, the *Tarantula's* that haunt the very Mountains that border upon *Apulia*, do no harm, let 'em bite when they will. The nocive Sort are bred in the Fields of *Apulia*, and do harm chiefly in Summer, by reason that their Poison is then exalted by the scorching Beams of the Sun, which makes 'em so mad and raging, that they assault every one that comes near 'em : Nay, they are not only offensive to Men, but to other Animals. Which is likewise observed by *Ælianus*, lib. 1. cap. 5. where he informs us, that the *Tarantula's* are pernicious to Harts, and that Ivy is their only Remedy ; insomuch that they die, if they do not eat of it in a very short time

time after they are hurt. The Inhabitants of *Apulia* are of Opinion, that their Wounds are most pernicious in the Season of Coition; that is, about the Beginning of Summer; upon the Plea that their Poison is then exalted both by the venereal Rage and the Summer Sun, as 'tis commonly reported of other venomous Animals. But after all, their Stings are very venomous in the After-Part of the Summer, as well as at the Time of their venereal Pride.

In that Part of *Apulia* which goes by the Name of *Bari*, the Reapers are frequently bit by 'em: For that Province being a very wide and pleasant Plain, covered with Wheat, with few or no Trees, is roasted and inflam'd, as 'twere, by the Beams of the Sun; the excessive Heat of which inspires the *Tarantula's* with a greater Rage, and makes 'em set upon the Reapers and Travellers with greater Fury. Particularly the Reapers are very much expos'd to their Bites; for the *Tarantula's* making their Progress either upon the Nastiness of the Furrows, or upon the Stalks of the Wheat, fasten readily upon their Hands or Feet; and for that reason they are wont to wear Boots to guard off the Injury.

'Tis generally believ'd, that a Viper does not bite but when 'tis provok'd; and accordingly we see some Mountebanks handle 'em without receiving any Injury, because they handle 'em dexterously and without Violence. Upon this Assertion Mr. *Charafs* grounds his Opinion, That there is no Poison hid in a Viper, but that all the Force of the Venom lies in the Spirits of the Viper, their being inflam'd and enrag'd by external Violence; insomuch that when the Spirits, thus inflam'd and exalted to a virulent Temper, are mix'd with the Humours of Animals, they presently raise a fatal Storm of Symptoms. But the



contrary being made out by the solid Experiments of my learned Friend Mr. *Rbedi*, I leave the Truth to be decided by impartial Judges.

Let better Heads judge, whether the same Question will lie upon the Venom of the *Tarantula*; This I know by my own Eyes, that a *Tarantula* attacks Persons asleep, as well as awake; and without any Provocation, as well as when 'tis irritated; and that in both Cases its Bites are venomous. When it bites, it throws out a small and scarce perceivable Quantity of Liquor; but indeed I am yet to learn, whether that Liquor is the Venom, or the Vehicle of inflam'd and venomous Spirits. 'Tis likewise manifest from the Experience of the *Apulians*, that not only their Bites, but even the Liquors in which they are stiff'd, are capable to produce pernicious Effects. And this we find confirm'd by an Eye-Witness, namely, *Epiphanius Ferdinandus*, cap. 2. observ. 81. Now this overthrows the Opinion of the inflam'd Spirits, for all the Force of the Spirits is sunk in the Liquor; and therefore we conclude, that the Venom of the *Tarantula* is lodg'd in a more solid Subject.

The Bite of a *Tarantula* raises a Sense, not unlike that of the Stinging of a Bee or an Ant. After the Part is bit, 'tis circumscrib'd with a little Circle of a livid, yellow, black, or some such Colour; a very violent Pain ensues, and sometimes instead of the Pain there's a Numbness, and divers such like Symptoms, according to the various Colour and Magnitude of the *Tarantula*, the various Exaltation of the Venom, the various Constitution of the Patient, and such other things; which cannot be set in a clearer Light, than by giving some Histories of Persons bit by 'em; which the Reader will meet with a little lower.

## C H A P. VI.

*A Description of the Diseases and Symptoms  
that ensue upon the Bite of the Tarantula.*

THE Life of Man is always a Scene of Unhappiness, but 'tis yet unhappier when 'tis teaz'd with Diseases, and unhappiest of all when plagu'd with Poison. The Poison of the *Tarantula* affords us a deplorable Instance of this Unhappiness; for such is the peculiar and uncommon Nature of this Venom, that when once it seizes the Body, it either kills the Patient out of hand, if Musick and a seasonable Use of Remedies does not immediately take place; or, when these are employ'd, makes such a deep Impression upon the Fluids of the Body, that it revives (as it were) every Year, and particularly in the three Months of Summer; and unless this anniversary Return be mitigated for the time with Dancing and the other Antidotes, it keeps the Patient all that Year under an innumerable Train of grievous Disorders.

Commonly the *Tarantula* bites People when they are asleep, and not aware of 'em; but if the Person thus bit is awake, he feels such a Pinch as if he were stung by a Bee or an Ant. The Part affected is seiz'd sometimes with Pain, and sometimes with a great Numbness: Immediately upon the Wound given, 'tis furrounded with a livid, black, or yellowish Circle; and soon after rises in a painful Swelling, which upon recourse to Musick and the Use of Remedies, vanishes along with the other Symptoms.

A few Hours after the Bite, the Patient is seiz'd with a great Difficulty of Breathing, a heavy Anguish



guish of Heart, and a prodigious Sadness ; his Voice is sorrowful and querulous, and his Eyes disturb'd ; and when he's ask'd by the By-standers where his Pain lies, he either makes no Answer at all, or points with his Hand to the Region of the Heart, as if that were most affected.

These Symptoms are most frequent upon the first Invasion of the Illness ; but they are not perpetual, neither are they common to all Patients ; nay, they are not produc'd by all *Tarantula's* ; for the Symptoms vary pursuant to the Variety of the Nature of the *Tarantula*, the Constitution of the Patient, and the greater or lesser Violence of the Summer Heat. Accordingly the *Apulians* observe, that the *Tarantula* of the Northern Places of *Apulia* are worse, and occasion more grievous Symptoms ; and withal, that those who are bit by 'em, are pleas'd with several Colours, especially a red, green, blue, &c. but not a black ; insomuch, that if the Attendants have Cloaths on of a Colour that's ungrateful to the Patient, they are obliged to retire out of their Sight ; for upon seeing the Colour they dislike, they are presently seized with an Anguish at Heart, and a Renewal of the Symptoms.

The Symptoms vary in pursuance of the Variety of the *Tarantula's*. The whitish *Tarantula* causes a slight Pain, follow'd by an Itching, a pricking Pain in the Belly, and a Looseness. The spotted *Tarantula* causeth a sharper Pain and Itching, and even Senselessness, Heaviness, Pain of the Head, Shivering of the whole Body, and the like. The blackish *Tarantula*, besides all the fore-mentioned evil Effects, is attended with a Swelling and grievous Pain in the Part that is stung, Cramps, Chillness, and a cold Sweat all over the Body, Speechlessness, an Inclination to vomit, Extension  
of

of the Yard, Swelling of the Belly, and others to be spoken of afterwards.

Since of the numerous and almost incredible Symptoms of Persons stung by the *Tarantula*, many seem to flow from a depraved Imagination, 'twill be reasonable enough to assert, That this Sort of Poison, after the sharp Fit of the violent Symptoms, which appear for the first Days, is over, ends at last in a peculiar Kind of Melancholy; which continually hangs upon the sick Person, till by Dancing, or Singing, or Change of Air, those violent Impressions are quite extirpated from the Blood and the Fluid of the Nerves; which very few have the Happiness to meet with: for 'tis certain, let a Person be once stung, there's no Expectation of ever being perfectly cur'd.

This Assertion has for its Confirmation innumerable Symptoms, which smell strong of a Disorder'd Fancy; for many of these Persons are never well but among Graves, and in solitary Places; and they'll lay themselves along on a Bier, as if they were really dead; they'll throw themselves into a Pit, as if they were in Despair. Maids and Women, otherwise chaste enough, without any Regard to Modesty, fall a sighing, howling, and into very indecent Motions, discovering their Nakedness: they love to be toss'd to and again in the Air, and the like. There are some that will rowl themselves in the Dirt like Swine, and are mightily pleas'd with the Exercise. Others again you cannot please, unless they be soundly drubb'd on the Breech, Heels, Feet, Back, &c. And there are some that take a great Pleasure in running.

There are also curious Observations made about Colours; some of which are very agreeable to those Persons, as others are offensive to 'em; and according to the different Degree of Depravation in the Fancy, sometimes they are refresh'd or offended



offended with one Colour, sometimes with another.

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## C H A P. VII.

*A farther Explication of the other Symptoms, and their Analogy with other Diseases.*

**G**enerally speaking, the Symptoms of Persons stung with the *Tarantula*, upon the first Accession of the Poison, are much like those usually observ'd in malignant Fevers, proceeding from Coagulation; such as Pains at the Heart, a Difficulty of Breathing, a strange Irregularity and Disorder in the Pulse, a sudden and almost fatal Failure of the animal and vital Actions. Of all these things my honoured Father is an Eye-witness, who, not many Years ago, at *Leccee* in *Apulia*, where he is a Physician of established Reputation, as every one knows, observed that when three sick Persons were brought hither from the Country sick of this malignant Fever, and having many Symptoms very like those that appear in Persons bit by the *Tarantula*, their Parents were of Opinion that they were actually stung; and therefore having sent for the Musick (tho' my Father oppos'd it as much as he could, and assur'd them the Distemper was a malignant Fever, proceeding from the Coagulation of the Blood,) the poor Patients, at the Instance and Persuasion of their Parents, fell a dancing together. One of them very fairly danc'd himself off the Stage, and the other two did not stay long behind. Whence we collect, that this malignant Fever is very often mistaken by Physicians. As for the Poison of the *Tarantula*,

tula, if I am able to judge of any thing, I am apt to believe that this Poison has its principal Seat in the Liquor of the Nerves, or the animal Spirits: For continual Pains of the Head, Faintings, Aching of the Bones, Unableness to move, Pains of the Stomach, Sicknefs at the Heart, and fuch like Symptoms, abundantly discover the diftemper'd State of the Spirits: But yet I would not exclude an antecedent virulent Difpofition of the Blood it felf.

The principal Parts that feem to fuffer moft by this Poison, are the Stomach and Heart, (if by the Heart we may underftand the Mafs of Blood that circulates through it; for I have no mind to contend about the Term) for they are feldom free from Diforders of the Stomach, Qualms, Thirft, Want of Appetite, Anguifh at Heart, Convulfions, Heavinefs, Preffure in the Breaf; whence they are always moaning, fighing, pale and filent. And it's worth the while to remark, that many of our Country-Women in the *Green-ficknefs* have had almoft the fame Symptoms with thofe that appear in Perfons poifon'd by the *Tarantula*; and becaufe they have been fuppos'd to be really infected, they have taken up a Custom of dancing every Year, and by this means have had the good Luck to rid themfelves altogether of that Diftemper, and the frequent Fits of the Mother. In regard this Exercife has remov'd thefe and feveral fuch Diftempers through Sweating, we may hence draw a practical Aphorifm, that fuch Diftempers of Women will never be more reasonably cured, than by ftrengthening Medicaments that may exalt the wafte and languid Mafs of Blood, and not by Purgatives, Saccharates, and the like; which do but weaken it the more. Amongft the principal Corroboratives, which ferve to repair the wafte Mafs of Blood in Chronical Difeafes, I mightily efteem riding out every Day in the Country Air,

efpeci-



especially in the Morning, by which I have perfectly cured some that were almost incurable. These things I have taken notice of by the by, concerning Dancing and Riding, to make it evident, how much Exercise serves to strengthen and refresh the sprightless Mass of Blood in Chronical Cases, when all other Kinds of Remedies are to no purpose, especially if the Distemper has its Rise from any Trouble in the Mind: But Riding is preferable to all the rest; for the whole Force of that jogging Motion terminates downward in the Bottom of the Belly, where a Fermentation is rais'd, by which the stagnating Matter recovers its lost Circulation.

Here it must not be conceal'd, that tho' in our Country there is really such a Thing as the Poison of the *Tarantula*, and Persons infected with it; yet Women, that make up a great Part of that Number, very frequently counterfeit it under the Mask of its usual Symptoms; for, whether they be under the Power of Love, or have lost their Fortunes, or meet with any of those Evils that are peculiar to Women, they never leave poring upon the mournful Object, till they run into Despair, or downright Melancholy, or at least are upon the Borders of it: And then they are also under a Disadvantage of living a solitary Sort of Life, like that of Nuns, deny'd the Benefit of free Converse with Men, though never so fair and honest. Besides all this, the Climate is sultry, their Constitution is of the same Nature, their Food hot and very nourishing, and their Life easy. Partly from the former, and partly from the latter of these Causes, 'tis no rare thing with them to turn mopish and melancholy: No wonder then, if they be mightily delighted with Variety of Musick and Dancing; whence they feign themselves to be stung by the *Tarantula*, on purpose to enjoy the agree-

agreeable Diversion of Musick, which is only allow'd to such Persons; and then the Sham passes the better, for that the Pretext is accompany'd with a real Paleness of Face, Sadness, Difficulty of Breathing, Sorrow of Heart, a depraved Imagination, and the other Symptoms of the pretended, rather than true Poison of the *Tarantula*. In fine, the musical Entertainment of this Country is so very agreeable to the Women, that 'tis a Proverb with us, *Il' Carnevaletto delle Donne*. But tho' Women counterfeit this Distemper sometimes, we must not therefore imagine, that all others do the same: for there are some Persons, otherwise both Learned and Religious, who not being satisfied of this upon the Credit of Persons that were stung, have made the Experiment upon themselves; and coming into *Apulia*, have been brought into such imminent Danger by being stung themselves, that they have confessed, unless the Musick had been ready at hand, their Lives would have gone for't. The same is asserted by our *Epiphanius* in the fore-cited place.

The venomous *Tarantula*, as we said before, is found no where but in *Apulia*, and there especially in the plain Fields; for such as are found in the neighbouring *Mountains*, are either without Venom, or if they have any, it is not so pernicious: And if one of the *Tarantula's*, which frequent the plain Fields, be removed into other Countries, as to *Naples* or to *Rome*, a Person may be stung by it without receiving any hurt at all; at least the evil Effects are few and inconsiderable, as will be shewn in the following Relations. Some there are who affirm, That such as are poison'd by the *Tarantula*, labour under the evil Effect of the Venom so long as the Spider lives: But this is an idle Story, and contradicts the infallible Experience of the People  
of



of our Country, so that I need not spend time to refute it.

Not only the *Tarantula*, but also the *Scorpions* of *Apulia* are venomous; for the Sting of the latter is observ'd to produce almost the same Symptoms as the Poison of the former: Those that are stung by them delighting themselves in Musick and Dancing, are cured by the very same Means only, as I shall shew afterwards. For this reason many of the old *Greeks*, and our Countrymen too have been of Opinion, that all those Symptoms which are commonly ascribed to the *Tarantula*, do principally proceed from the Sting of *Scorpions*; but as this is also against the standing Experience of our Country, I shall therefore now lay down this for a certain Truth, That the *Tarantula* and *Scorpion* of *Apulia* are both of 'em most venomous, and produce almost the same Symptoms, and are cured by the same Means, that is, by Musick and Dancing, and the like. The *Scorpions* however are not so virulent as those of *Africa*, but more than they are in any other Part of *Italy*.

There are some that die in a very few Days after they are stung by the *Tarantula*, the usual Remedies being of no Advantage to them at all: Others again are recovered from imminent Death by the said Means. But the Seeds of the Poisons give the Humours of the Body so deep a Tincture (which is not usual in other Poisons) that there is scarce any Possibility of utterly extirpating them, so that they seldom fail of accompanying the Patient to the very Grave; and as I always said, where-ever this Poison enters, it makes an indelible Impression.

It is a Piece of Curiosity to search into the Period and Revival of Poisons. The Poison of a Dog has been sometimes observ'd to cleave to the Mass of Blood for thirty Years; and having its

Rated

stated Seasons of recovering its Vigor, has continued to the very Death of the Person infected. Upon this Subject, it will be worth while to read *Hildanus's History*, Cent. 1. Ob. 86. concerning a Matron, who being bit by a mad Dog, found the Poison renew'd its Vigor every seven Years, for almost thirty Years together, till at length she died. 'Tis commonly believed, that if the Poison of a Dog keeps undiscovered for 40 Days together, it will never appear any more; but this appears to be false from the forementioned History; and I my self did see at *Rome* this very Year 1695. an Apothecary, who being bit by a Dog in the Month of *June* this same Year, when he was at *Urbino*, the Place of his Nativity, and having afterwards come to *Rome*, was on a sudden taken with the Distemper that's usual in such Cases, and in two Days after dy'd about the Middle of *October* last past. The same thing has been observ'd in a young Physician by the Celebrated *Luccas Tozzius*, who is at present Physician to the Pope, as he was lately pleased very freely to tell me. *Fracastorius*, lib. 2. de morb. contag. says, I my self have seen a Boy, who eight Months after he was bit by a Dog, discovered the Contagion, of which he presently dy'd. The Impressions of the venereal Distemper stick to the Blood for 30 Years together and better, without any Trouble or Injury to the Patient's Health; but then there is as vigorous a Return of the Symptoms, as if it were upon the first Onset. The Poison of the *Tarantula* renews it self infallibly every Year, especially about the same time when the Patient receiv'd it.

When the Heat of the Sun begins to be violent and scorching, which happens about the Beginning of *July* and *August*, such as are infected with the Poison of the *Tarantula*, sensibly perceive it renewing it self by degrees, and discovering it self



by want of Appetite, Sicknefs at Heart, Heaviness of the Head, Thirst, Pain in the Bones as if they were broken, and such like, which sometimes come gradually, and sometimes all on a sudden, casting the Patient into a violent Fit. If the Patients are aware of the gradual Advancement of the Symptoms, they presently have recourse to the Musical Entertainment, to prevent their being taken with a sudden Fit: But if it comes upon them unawares, without the previous Symptoms, then, like Persons struck with Thunder, they fall down upon the Ground half dead, the Hands, Face, and other remote Parts of the Body turning black, the Breath almost quite stopp'd; and in this Condition they lie till the Musicians come, by whose wonted Tunes they begin to recover by little and little, and to be prepared for the Dance; moving first their Limbs, and then the whole Body.

If the Patient happens to lose the Season of Dancing, then will he be under very grievous Symptoms all that Year; such as a Jaundice Colour in his Skin, Sicknefs at Heart, Want of Appetite, a slight Fever, and the rest of them, which we have already mention'd over and over. Further, if he eats any Weather-Mutton, Cucumbers, or Citruls, he is presently seiz'd with a grievous Pain at the Stomach: But then if he makes use every Year of the Season for Dancing, and by Sweating and the Sound of the Musick throw out the Seeds of the Poison, he holds very well all that Year, and is not liable to any of the foremention'd Symptoms.

## C H A P. VIII.

*Of the Cure of the Sting of the Tarantula,  
and of the evil Effects it produceth.*

**W**Hoeever happens to be infected with any sort of Poison, is thereby brought into great Danger; and much more they that are stung by the *Tarantula* or *Scorpion* of *Apulia*, many of whom die quickly in the space of an Hour, the usual Remedies being of no Advantage.

The Effects of Poison are generally reduced by Physicians to two Kinds, *viz.* Coagulation, and Dissolution of the Mass of Blood. Any one may infer from the Symptoms that have been so often repeated, that the Poison of the *Tarantula* has a Tendency in it to curdle or thicken the Blood, and there needs no farther Evidence of that, than the sudden Oppression of the Pulse, Anguish at Heart, great Difficulty of Breathing, Blackness of the Face and other extreme Parts, Chilness and a Shivering all over the Body, deep Sleep, and such like; which indeed are various according to the Nature of the *Tarantula*, or Constitution of the Patient, and some antecedent Indisposition of the Body, as the Summer is more or less hot, and the like. When any one is bit by the *Tarantula* or *Scorpion* of *Apulia*, the Cure is perform'd by dissolving and attenuating the poison'd Humours of the Body, by *Alexipharmicks*, *Theriacks*, *Bezoardicks*, and other Remedies, differing but little from those that Physicians commonly use in the Case of Persons stung by *Vipers*. With us they scarify the Place that is bit with a Lancet, and sometimes is so void of Sense, that the Patient feels no Pain while the Incision is a making.



When this is done, they apply a Cupping-Glass to extract the Venom; then they chafe the Part with Treacle and bruised Garlick, and sometimes with Mithridate, or Confection of Orvietan, till the Poison is in some measure weakned.

For my part (if ever I may have my own Will in this Matter) I should forthwith sear the Place that's bit, with a red-hot Iron: For as Fire is a most eager Stimulative, it serves to shog the Fibres of the Part affected, and successively the whole Frame of Fibres in a human Body; or to give them a quick, continued, and vehement Motion; by which means the adjacent Humours are loosen'd and mov'd to and again, attenuated, and scarce ever suffer'd to be fix'd by the coagulating Venom; especially in the Part affected, where the Fire is more pungent, and the Humours more inclin'd to curdle. But because I never yet made Trial of those happy Effects of Fire, nor receiv'd their Confirmation from other Authors, I shall wave for the present any farther Encomiums upon them; however, 'twill not be amiss to take notice of the Effects of Fire in other Diseases. I have often observ'd, that searing with a hot Iron in the Beginning of Gangrenes or foul Ulcers, has had very ill Effects; for the Scar that the unsearable Searing produc'd, quite stopp'd and shut up the Fibres and Vessels that lay open before: So that the necessary Evacuation of the Corrosive and Gangrenous Humour being thereby hindred, no wonder that the noxious Humour of the Ulcer, retiring farther inwards, according to the Difference of the Parts in which 'twas lodg'd, produced various and dreadful Symptoms; nay, more than this, the seared Part has been quite dry'd up and grown black; and after a Number of Evils in the Compass of a very few Days, has terminated in the

the Death of the Patient : As I have several times observ'd at *Padua*, and other Hospitals of *Italy*.

When therefore such Ulcers are to be cured, which may be suspected of Malignity, and have a very corrosive Humour in them, Recourse must not presently be had to hot Irons and Causticks ; but let Care be taken, in the first place, to foment them with Balsamick Decoctions, Vulneraries, and the like ; by which the corrosive Humour is drawn outwards, the feeble and wasted Fibres are restor'd, and the Humours circulating through the Place affected, receive a Balsamick Sweetness and Strength. And here I am free to say, That if laying aside Ointments and the oily Remedies of ordinary Physicians, those vulnerary and Balsamick Decoctions are us'd inwardly and outwardly, and the malignant and gangrenous Ulcers be at the first manag'd in this Method patiently and assiduously, they will not only be cur'd in a little time, but will scarce ever corrupt again, or grow incurable. But if these Remedies are of no Service, and the Ulcer is observ'd to grow contagious and feeding ; in these two Cases, only recourse must be had to Burning and Causticks, and at length to the cutting off of the Member, if there be great Fear of a Gangrene. After the Ulcer is seared, Care must be taken that the Scar falls off as soon as possible ; lest the Mouths of the Vessels being thereby shut, should hinder the Eruption of the malignant Humour, as I observ'd but now. Besmear the Part with the Juice of Parsly, and 'twill soon throw off the Scar. If upon the Place that is sear'd be blown the Flower of Wheat-Meal, reduc'd to as fine an Alochol as possible, and thereupon be apply'd a Pledget moistned in black Wine, and left upon the Ulcer for the Space of one Day, after which 'tis to be fomented with Linseed-Oil, then



also the Escar will fall off. I have seen at *Padua*, when the Cure was perform'd by D. *Marchetti*.

But to return into our way from this Diversion: After the Physicians of our Country have thus scarify'd the Part bit by the *Tarantula*, and ply'd it with *Alexipharmacks*, then they have recourse to inward Remedies; amongst which, the Principal are the Spirit of Wine, distill'd with *Rosemary* or *Hungary-Water*; or rather, the very Essence of *Rosemary* distill'd by it self, and taken with *Treacle-Water*, or the Water of *Citron Rind*, or *Hyssop*, *Parsly*, wild *Thyme*, &c. There may therefore presently be given the said Spirit of Wine tinctured with *Rosemary*, from one Ounce to two, with *Thyme-Water*, or with the Decoction of preservative Herbs; and the Patient must be well cover'd in a Bed to bring him to a Sweat: and that he may more easily fall into it, a linen Cloth, moistned with the Spirit of Wine, and (after it has been slightly warm'd) wrapp'd about his naked Body, is commended as very useful. *Epiphanius Ferdinandus*, in his Observations, proposes the following Electuary, which he calls an *Antiphalargium*, as very useful, and what he has made Trial of, viz. Take of *Myrtle-Berries*, and *Tamarisk Wood*, of each an Ounce; *Seeds of Parsnips*, black *Coriandar*, *Chast-Tree*, *Carrots*, *Anise*, *Cummin* and *Origanum*, of each a Dram; *Seal'd-Earth*, and *Oriental Bole-Armoniack*, of each two Drams; with Syrup of the whole *Citron*, make an Electuary; of which take two Drams every Day in the Morning, drinking above it the Decoction of *Alexipharmacal Herbs and Roots*. But in earnest, these or any other Remedies that can be propos'd are to little or no purpose, unless the Musick be presently us'd, as is well known by the constant and infallible Experience of those Parts of the Country. This must be own'd to be the principal Antidote against the Poison of  
the

the *Tarantula*; and when once that is heard, the Patients, tho' they lay before as if they had been taken with an Apoplexy, begin by degrees to move first their Hands and Feet, and afterwards the other Parts of the Body, till at last they fall a howling, sighing, uttering obscene Expressions, and dance for three Days together. But of these singly.

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C H A P. IX.

*Dancing and Musick are the principal Antidote for this Poison; where, by the way, a Description is given of the Manner of Dancing, so usual in Apulia.*

**B**Ecause those that are stung by the *Tarantula* die in a little time, without the present Assistance of Musick, all other Remedies giving no Relief; it will not be amiss to give some Account of the Manner of Dancing that is so usual with us.

When any are stung, shortly after it they fall down upon the Ground half dead, their Strength and Senses going quite from them. Sometimes they breathe with a great deal of Difficulty, and sometimes they sigh piteously; but frequently they lie without any manner of Motion, as if they were quite dead. Upon the first Sounding of the Musick, the foremention'd Symptoms begin slowly to abate, the Patient begins to move his Fingers, Hands, Feet, and successively all the Parts of the Body; and as the Musick increases, their Motion is accelerated; and if he was lying upon the



Ground, up he gets, (as in a Fury) falls a Dancing, Sighing, and into a thousand mimick Gestures. These first and violent Motions continue for several Hours, commonly for two or three; after a little Breathing in a Bed, where he is laid to carry off the Sweat, and that he may pick up a little Strength, to work he goes again, with as much Eagerness as he did before, and every Day spends almost twelve Hours by the Clock in repeated Dancing; and, which is truly wonderful, so far is he from being wearied or spent by this vehement Exercise, that (as they say) it makes him more sprightly and strong.

They frequently begin to dance about Sun-Rising, and some continue in it without Intermision till towards Eleven in the Forenoon. There are, however, some Stops made; not from any Weariness, but because they observe the musical Instruments to be out of Tune; upon the Discovery of which, one would not believe what vehement Sighings and Anguish at Heart they are seiz'd with; and in this Case they continue, till the Instrument is got into Tune again, and the Dance renew'd; and 'tis strange, that poor Country Girls and Boys, that perhaps in all their Lives never so much as set their Eyes upon any of the better Sort of musical Instruments, should upon this Occasion become so able Judges of the Tunableness or Untunableness of 'em,

About Noon the Exercise ceases, and they are cover'd up in a Bed to force out the Sweat: When this is done, and the Sweat wiped off, they are refresh'd with Broth, or some such light Food; for their extraordinary want of Appetite will not allow them to feed higher. About one a-Clock after Noon, or two at farthest, they renew the Exercise as before, and continue it in the manner above-mention'd till the Evening; then to Bed they go again







again for another Sweat : When that's over, and they have got a little Refreshment, they lay themselves to sleep. This way of Dancing commonly holds four Days ; it seldom reaches to the sixth.

The Space of time for Dancing is not generally certain ; for there are many that continue it till they find themselves freed of all the Symptoms, which very frequently happens after the third or fourth Day ; for then the Mass of Blood being clear'd from the virulent Parts by repeated Sweats, the Patient enjoys the Benefit of Health as before, and all that Year is free from the ill Symptoms of that Distemper. But tho' the venomous Seeds of the Disease are remov'd from the Blood by Sweats, which this Exercise procures, it does not therefore follow, that those which are produced by the common Diaphoreticks will have the same Effect : For when several of our Physicians have set aside the Dancing, and brought the Patient to a Sweat by Diaphoretick Waters and Confections, some Days before it was suppos'd the Fit wou'd come upon him, it has come nevertheless, and that with greater Eagerness ; so that they have been forc'd to repair to the Dance, and by frequent Sweats this procur'd way to turn off the Fit.

About the same time of the Year that the Patient was stung, the grievous Symptoms of this Distemper make their Return ; so that if any are not quick enough to get before-hand with the Distemper, by having recourse to the Dances. the Fit comes upon them unawares ; and where-ever it finds them, down they fall, as if seized with an Apoplexy, and become speechless the Face and Extremities of the Body turning black, &c. Upon the Notice of this, their Relations presently send for the Musick ; upon the hearing of which, they begin by little and little to come to themselves ; and moving themselves, as was said before,  
get



get up and fall a dancing : And, as I also took notice already, if the Season for Dancing is slipp'd, and the Advantage of Sweating procur'd by that Means lost, the Patient must expect to be severely afflicted all that Year, by want of Appetite, a Jaundice Colour in his Skin, Weariness all over the Body, and the other fore-mention'd Evils; which grow yet worse and worse, if he neglects the following Years also to dance; till at length he falls into an ill Habit of Body, Dropsy, and other incurable Diseases.

I will here subjoin some Curiosities observ'd in those Persons in the Time of Dancing. In this vigorous Exercise they generally sigh, make heavy Complaints, and (like Persons in Drink) almost quite lose the right Use of their Understanding and Senses. Their Parents, and other By-standers, receive the same Treatment from them; and they scarce remember any thing that's past. Yet there are some of them that, during the Exercise of Dancing, are mightily pleas'd with the green Boughs of Vines or Reeds, and wave them about in their Hands in the Air, or dip them in the Water, or bind them about their Face and Neck, and even plunge their Hands and Faces into the Water. There are others of them that love to be handling red Cloaths, and naked Swords. Hereupon the common People have taken up a prevalent Opinion, That such of 'em as love to dance with green Vine-Branches in their Hands, have been stung by the *Tarantula*; and that, on the other hand, such as love red Cloaths and the naked Sword, have been stung by the Scorpion; the Truth of which I leave undetermin'd. Others again, when there is a little Intermision of the Dancing, fall a digging of Holes in the Ground, which they fill with Water, and then take a strange Satisfaction in rolling themselves in them like Swine. Lastly, when they

they begin to dance, sometimes they call for Swords, and there they act the Fencer, flourishing as they dance ; sometimes they are for a Looking-glass, but then the Sight of themselves fetches up many a deep Sigh. Sometimes their Fancy leads them to rich Cloaths, curious Vests and Necklaces, and such like Ornaments ; and then they are highly courteous to the By-standers that will gratify them with any of these things ; they lay them very orderly about the Place where the Exercise is perform'd, and in Dancing please themselves with one or other of them by turns, as their troubled Imagination directs them. They are most delighted with Cloaths of a gay Colour, for the most part red, green, and yellow. On the other hand, they cannot endure black, the very Sight of it sets them a fighting ; and if any of those that stand about them are clad in that Colour, they are ready to beat them, and bid them be gone.

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## CH A P. X.

*Some other Things belonging to this Exercise are briefly consider'd.*

**A**S the *Tarantula's* are of different Sizes, Colours and Virulency ; so the Persons stung by them are delighted and moved to dance by different Kinds of Sounds, according to the Difference of the *Tarantula* that infected them. Nay, every Patient has not only his particular Tune, but also his particular Instrument : Some a Pastoral Pipe, others a little Drum, Cittern, Harp, Timbrel, Violins, and Pipes of several Sorts. Here 'tis remarkable, that sometimes the Musicians will tune  
three



three or four different Sorts of Sounds, without having the least Effect upon the Patient. But when they fall into a Tune that's accommodated to the Poison, they presently receive the Benefit of it. However, this must be taken for a Truth, That how much soever they vary in their particular Tunes, yet they all agree in this, To have the Notes run over with the greatest Quickness imaginable (which Quickness of Sound is commonly call'd *Tarantula*.) And therefore the Players, that have not their Lesson to learn in these Matters, easily discover the Cheat of the Women: for if they find that they presently take any Motions, and jog on indifferently, without any regard to the Swiftmess, Slowness, or other Difference of Sounds, they give to understand, that the honest Woman is but in jest; and afterwards Experience puts the Matter out of doubt.

This is what I had shortly to remark concerning the way of Dancing, and the Effects of it. It remains now to examine, Whether Musick has so much Influence upon the *Tarantula* it self, as to put it upon dancing, and whether other Animals that are stung by it necessarily dance.

That the *Tarantula* it self does dance at the Sound of Musick, is what some have believed; as *Kircherus Mund. Magnet. lib. 13. part. 8.* and other Authors, who have judg'd upon the Credit of others, rather than from what they themselves have seen. But from what has been already said we must know, that the *Tarantula* is a Sort of Spider, or an Eight-ey'd *Phalangium*; the Substance of which is almost all brittle, membranous, and most subtile, filled with a peculiar Sort of nutritious Lympha (for I seldom or never observ'd any Appearance of Blood in it) so that it is no wonder if the slightest Motion from within causes involuntary Throws.

But

But besides this, it is in the very Nature of the Insect to be inclin'd to Leaping, and other vehement Motions, and it has scarce ever been observ'd to rest; and farther, the extraordinary Heat of the Summer adds to this; and by exalting and attenuating its Humours, heightens the Motion. I have seen the Leg of the *Tarantula* pull'd off, dance for almost two Hours together. There is yet a third Cause, and that is the undulatory or wavering Motion of the Air, which being struck pretty sharply by the Musical Instruments, and terminating upon the membranous Body of the Insect, makes it not at all strange, if it seem to move at the Sound of the Musick, altho' that Dancing proceed from these external Motions, rather than any Pleasure or natural Instinct inclining it to move so upon that Occasion; all which will be more evident to any that shall read a Treatise of the Force of Percussion, publish'd not many Years ago by the celebrated *Borelli* (a great Ornament to the Academies of *Naples* and *Rome*) wherein many Secrets of the Power of Impulse are examin'd. But tho' this is my own Mind in the Case, yet I don't obstinately deny its dancing from a natural Instinct also, especially as we have the Word of the forecited *Epiphanius* for it, and of several other Eye-witnesses; only I think the Matter needs a little further Proof.

We are now to enquire, Whether the other Animals, being stung by this Insect, are inclin'd to dance as well as Man. With us the Affirmative is generally held, and I have often heard it from Eye-witnesses. *Sennertus* also *lib. 1. cap. 7.* from *Epiphanius* his Observations tells us, that a Wasp being stung by the *Tarantula*, fell a dancing together with it at the Sound of Musick; and that a Cock happening to be in the way, was by the same Means brought in for Company. Whether other  
Animals



Animals that are stung by the *Tarantula*, are put upon that dancing Motion from the same Causes, which we have observ'd but now to have that Effect upon the *Tarantula* it self, is what I question very much; yet I confess, that as those that are bit by a mad Dog will howl, and in other respects act like Dogs, which proceeds perhaps from the Impressions of certain Ideas of the mad Dog upon the Poison, and conveyed along with it; so if the Instinct and Inclinations of that little Creature are latent in its most active Poison, and be thereby communicated to other Animals, it is no great wonder if they exert their whole Power in them, and that in a way very agreeable to the Nature of the Insect.

About Ten Years ago, when I was practising at *Naples* in that fam'd *Emporium* both of Learned Men and Sciences, a Friend of mine was at the Pains to bring thither some of these Insects alive from *Apulia*, about the Month of *August*. One of them we first irritated by striking it slightly, and then set before it the Head of a live Coney, the upper Lip of which in a little time it stung in two places. Two Hours after this, the Lips swell'd remarkably, and grew black; and the Coney it self being taken with a strange Difficulty of breathing, the Hair at the same time standing straight all the Body over, fell down to the Ground. 'Till the fourth Day, it took neither Meat nor Drink; but lying senseless, and being much oppressed by the foremention'd Symptoms, the fifth Day about Noon it dy'd.

Before its Death, the Head, Lips and Tongue were grievously swell'd; ay, and the Abdomen too; and tho' the Musician came and us'd great Variety of Tunes, yet it had no Effect upon the Coney, which still lay quiet, and without Motion. It is therefore probable, that that Poison does not produce the strange Effects of Dancing any where

but in *Apulia*, where by the scorching Heat of the Sun it is exalted to its due Height, and not in other Parts that lie perhaps under a colder Climate. I purposed, upon my Return to *Lecce*, to make some Experiments in Animals by the Sting of the *Tarantula*; but as I had scarce got home before I was to travel into foreign Countries, I cou'd do nothing at all in that Matter.

When the Body of the Coney was open'd, we found the Veins and Arteries of the Brain swell'd up, and the Brain it self a little inflam'd and set about with blackish Spots here and there. The Lungs and other Entrails were distended with clotted and black Blood. In the Ventricles of the Heart were observ'd greater Clotts of Blood, and small Branches of a Polypous Concretion; there was abundance of Serum lying about the outward Parts of the Brain: The other Parts were all found and untainted.

There is nothing more frequent in the opening of Bodies, than to meet with extravasated Serum in the Parts and Cavities of it. But I have observ'd it especially in the Bodies of such as have dy'd through a general Coagulation of the Blood, or rather a particular one, there being an Obstruction in some of the Bowels. By general, I mean that which is in malignant Fevers proceeding from Coagulation; by particular, that in the Apoplexy, several Diseases of the Lungs, Obstructions of the Entrails, and hard Swellings. Whence we very often find in Persons that die of an Apoplexy, abundance of Serum swimming both without and within the Brain. In such as die of distemper'd Lungs, it is found in the Cavities of the Breast, and so on: And this dislodging of the Serum is rather to be reckoned amongst the Effects than Causes of the principal Disease, in as much as it discovers it self but a few Days or Months before Death.



Death. Which I have principally observ'd in such as die of a Polypus in the Heart, who a little before Death begin to be afflicted with an œdematous Swelling of the Feet, then turn hectic, and at last fall into a Dropsy. To this agrees what I have observ'd concerning the Asthma, and other pectoral Diseases, in which there is some Obstruction in the right Auricle, or right Ventricle of the Heart; as a Dilatation, Aneurism, Polypus, Ossification, and the like, which hinder the Blood from discharging it self out of the right Ventricle of the Heart into the Lungs. In these Distempers, I have observ'd a Tumor in the outer Part of the Right Hand, coming on gradually, of a natural Colour, or somewhat pale; which, upon the hastening of the Distemper to produce its fatal Effect, has been rais'd higher, and expanded it self thro' the whole Arm. Whenever therefore any one shall take notice of this Tumor in the Back, and soon after in the Hollow of the Hand, and that it is attended with a Difficulty of breathing, he may be bold to assert, that there is some Obstruction about the Right Ventricle of the Heart, or its Auricle, as will appear more evidently upon the Dissection of the Corpse.

## C H A P. XI.

*Several Histories of Persons stung with the  
Tarantula.*

## H I S T O R Y I.

**I**N the Year 1689, a Noble Woman of *Lecce* returning out of the Country to the City, stept aside into a Wine Cellar, whence after a little Stay there, she returned home; and as she was employing her self about her Household Affairs, felt somewhat like the Bite of an Emmet in her Right Thigh. In the mean time, not regarding so slight a Matter, she went to Dinner; but she had scarce begun to eat, before her Thigh and other inferior Parts were gradually seized with a Numbness, so that she was not sensible of any twitching. Hereupon she leaves her Dinner, retires to her Chamber to look to her Thigh; and found in the Place that was bit a small Tumor, about the Bigness of a Pea, of a dark reddish Colour, and somewhat inclining to blue. Forthwith she apply'd to it Treacle and bruised Garlick mix'd together; and at the same time found her self taken with a violent Anguish at Heart, and great Difficulty of breathing. A little after, being got to Bed, there came upon her an universal Trembling, and that with such Violence, that two robust Men could scarce hold her. Not long after, she was taken with a grievous Pain in her Joints and Toes; and so great was her Pain, that she could hardly bear the Weight of a slight Linen Smock that was put upon her. The Physician being call'd, lanc'd the Part affected several ways, and then apply'd to it Treacle and bruised Garlick mix'd together, and

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gave



gave inwardly Confection of Alkermes with generous Wine, but all to no purpose; for Loss of Speech and Difficulty of breathing increas'd upon her; and she found, she said, her Tongue so pull'd in, that she could not get her Words pronounc'd. All these happen'd in the Compass of three Hours after she was bit; and to these were added a great Thirstiness, Want of Sleep, Pain at Heart, Loss of Appetite, and many other Symptoms. Whence her Parents began to suspect there might be something of the Sting of the *Tarantula* in the Case (tho' they found it not in the Place affected) and thereupon advis'd the Patient to dance; but with Tears running down, she told them, that the Pain of her Joints, and the total Loss of Strength made it impossible for her to do that.

But the Disease growing still more violent, the Musicians were sent for, who standing by the Bed-side, ask'd the Patient what was the Colour and Size of the *Tarantula* that stung her, that so they might fall upon the Tune that was peculiar to it; and when she made answer, that she could not tell whether she was stung by the *Tarantula* or Scorpion, they play'd at a venture two or three different Kind of Tunes, which had no manner of Effect upon her; but upon the hearing of a fourth different from the other, she began to sigh; and not being able to moderate the most vehement Impulses rais'd in her by the Musick, without any regard to Modesty, sprung out of Bed almost quite naked, fell a dancing with great Eagerness, and so continuing for three Days in the usual Method, was freed from all the Symptoms. But tho' the Patient kept very well all that Year, yet every Year after, especially about the Time of her being stung, the Symptoms are renew'd, and there is a Pain, Tumor, and reddish Colour in the Place

that was stung, and the same

that was stung; but then these are all remov'd by the Dancings we have already describ'd.

## HISTORY II.

Another Lady also of the same City happening to be stung by the *Tarantula*, was taken with the same Symptoms, more or less violent; but by dancing according to the Custom of the Country, turn'd them off, and was very well all that Year. But every Year after, about the wonted Revival of the Poison, her Toes were seiz'd with a most violent Pain, by which they were inflam'd; and by the falling down of the Inflammation, there flow'd out at the Nails a thin and most sharp waterish Humour, that grievously ulcerated the adjacent Parts. Upon these Accounts, the Lady being oblig'd to dance, after the Exercise was over, found her self presently cur'd of the foremention'd Symptoms of her Toes and whole Body, and even the Nails of her Toes fell quite off.

## HISTORY III.

An old Man of about 70 Years, and of a pretty strong Constitution, born in the City of *Nardo* near *Lecce*, towards the Beginning of the Month of *July*, laid himself to sleep in the Fields, and particularly in a Corn-Yard about Mid-day; he happen'd suddenly to be stung with a slender Prick; upon which he wak'd, and clapp'd his Hand hard upon the Place that was stung: afterwards baring his Thigh, he found a black Scorpion lying dead by the Part affected. A little after, he was taken with a heavy Anguish at Heart, an universal Faintness, Pressure in the Breast, Weakness in the Head, and other Symptoms. The Disease was so far from abating through the Means that were us'd both



inwardly and outwardly, that all grew worfe ; and the Patient being kept fast a Bed, clapp'd his Hands, call'd for Vine-Branches dipt in Water, had a great Desire for Musick and Dancing, and made a great Motion with his Feet as he lay upon the Bed. Mean time in came the Musick, upon the hearing of which the old Man was wonderfully pleas'd ; but yet through extreme Weakness, and continual Pressure of Breast and Heart, he cou'd hardly be mov'd from one side to another ; so that in a few Hours after, he was seized with a violent Pain that carry'd him off.

#### HISTORY IV.

A Country Youth about *Nardo* having got a Melon, that had a natural Hollownes in it, wherein lay a Scorpion, first threw off the Scorpion, and then eat up the Melon. In less than two Hours after, he was taken with a most severe Cholick, presently after with a Fever, and most fatal Symptoms both of the vital and natural Region ; the Violence of all which brought him to his End the third Day. He also was mightily pleas'd with the Musick and Dancing, and wou'd always have the green Leaves of Reeds by his Bedside. Whence we infer, that he dy'd by the Virulency of the Scorpion.

#### HISTORY V.

*Of the Virtue of the Lapis Indicus, or Indian Stone, commonly call'd Serpentinus, against the Stings of Scorpions.*

This Stone is found in the Head of the Indian Serpent, with us *Cobra de Capelo* ; and by the common Consent of all that write of the Product of  
that

that Country, is believ'd to be a Specifick to draw out Poison from any Part that has been stung by a venomous Creature. It has nevertheless been discover'd, by the repeated Experiments of the most accurate *Rhedi*, made on it about the most powerful Poison of the Oil of Tobacco, Vipers, and *African* Scorpions, that its Virtue of sucking out Venom is only pretended and false, as may be seen by his Letter to *Kircherius*. It was long before I cou'd any way quit the Opinion of so great a Man, because of the great Weight of the Experiments which he has made in the Court of so great a Prince : But having received most acceptable Letters, when I was employ'd in writing these things, sent me to *Rome* by my Father, from the very Learned Father *John Dominicus Putigrani*, of the Society of *Jesus*; I chang'd my Opinion, as having understood from those Letters, that the Virtue of the foremention'd Stone cou'd not be altogether pretended, but partly true, of which that Learned Father has made Experiment at *Paula*, a City of *Calabria*. The Substance of the foremention'd Letter is this:

“ Upon my Departure some Years ago from  
 “ *Sicily*, I took along with me some of the Ser-  
 “ pentine-Stones, which were given me by a Re-  
 “ ligious Gentleman that was lately come there  
 “ from *Portugal*. I went to *Paula*, a Town of *Ca-*  
 “ *labria*, where I staid for some time. Mean time  
 “ one of the Peasants of *Calabria* had his Neck  
 “ stung by one of the Scorpions of that Country  
 “ in the Month of *August*, but making a slight  
 “ Matter of it, us'd no Remedy; and therefore  
 “ most fearful Symptoms coming upon him, he  
 “ was brought into imminent Hazard. Three  
 “ Days being pass'd, upon Information of his  
 “ Case by his Friends, I presently went to the



" Patient, to make an Experiment of the Virtue  
 " of these Stones. When I came I found him in a  
 " dying Condition; his Son shew'd me the Part  
 " of his Neck that was stung, which had a little  
 " Escar grown over it. After having made an  
 " Incision with a Lancet, I presently apply'd one  
 " of the foremention'd Stones, which stuck very  
 " close to it; and within four or five Minutes of  
 " an Hour, the Patient began to sigh strangely,  
 " and to fetch his Breath pretty fast, and in about  
 " a quarter of an Hour was perfectly cured, many  
 " of his Countrymen being present. I took notice  
 " when I first apply'd the Stone, that it was pre-  
 " sently to be discharged of the Poison that it  
 " suck'd in, by infusing it in Milk, by which  
 " means the Seeds of the Venom were taken off.  
 " Altho' the Patient was freed from the Disease in  
 " a quarter of an Hour, yet for his greater Safety  
 " he continu'd to apply the Stone for other two  
 " Days; and I observ'd every fresh Application,  
 " it always left in the Milk something of the ve-  
 " nomous Substance, till at length it did not co-  
 " lour it at all". This is the Substance of the Let-  
 " ter sent me by that Learned Father, writ in *Ita-  
 lian*.

Whence we must infer, that the foremention'd  
 Stones do truly extract Poison; but because there  
 are many counterfeit ones sold for a small Price by  
 the *Arabians* and *Indians*, who herein put the cheat  
 upon us the Inhabitants of *Europe*, as the foresaid  
 Mr. *Rbedi* acknowledges, it is therefore no wonder  
 that very often they fall short of Expectation.  
 By the way, we must call to mind the Rules laid  
 down by Mr. *Boyle*, in his Treatise concerning the  
 Unsuccessfulness of Experiments; where he dis-  
 courseth at large of Experiments that succeed not,  
 tho' they be really true ones.

## HISTORY VI.

*Francis Mussel*, a Peasant of the Province of *Lecce*, ten Years ago, about the Beginning of *July*, was stung in the Left Hand by a *Tarantula*, as he was busy gathering Ears of Wheat. Having kill'd the Spider, he went home with his Company; but by that time they had gone half way, on a sudden he fell down upon the Ground, as if he had been seized by an Apoplexy; after which he could not breathe without Difficulty, his Face, Hands, and other Extremities turning black. His Companions that knew the Cause of his Distemper, fetch'd the Musick; upon the Sound of which the Patient by degrees came to himself, beginning to sigh, and to move first his Feet, then his Hands, and so the whole Body; at last getting upon his Feet, he fell a dancing very keenly, and fetch'd up such dreadful Sighs, that he almost frightened those that were with him. As he danc'd about, he bore in his Hands green Twigs of Reeds and Vines moisten'd with Water; sometimes he rowl'd himself upon the Ground, and struck very fiercely upon it with his Feet. Two Hours after the Musick began, the Blackness of his Face and Hands went quite off; and having gone through the Dances for three Days after the usual manner, and so forcing out Sweats, he was restor'd to perfect Health. Every Year, about the time he was stung, the Pain in the Part affected returns with all the fore-mention'd Symptoms, but not so violently; and unless the Paroxysm that comes creeping on be prevented by Musick and Dancing, he is seiz'd with it on a sudden, so that about the suspected time he is often found by his Friends lying in the Fields, struck down with the fatal Disease; but



then the Musick being brought, he is presently cured again.

## HISTORY VII.

One *Peter Simeon*, of the Province call'd *Terra d' Otranto*, a young Man of a hot and dry Constitution, living in the Country, was stung one Night under his Left Ribs by a *Tarantula*, which perhaps was of the blackish Kind, as may be gather'd from the ensuing Symptoms. He presently found a grievous Pain in the Place that was stung, and forthwith fell down upon the Ground, seiz'd with a Chilness all over the Body, a standing of the Hair, Pain of the Share-Bone, Extension of the Yard, &c. His Legs were feeble, he fell a sighing and wailing, and complain'd he was like to be suffocated, endeavouring to cry aloud, but was not able. Next Morning they that were about him carry'd him to the Town, brought the Musick to him; and that Kind of it was most agreeable to him, which the People of our Country call *Catena*. Upon the hearing of the Musick he began to dance, Sweats came very fast upon him, he kept waking for a Week, drank pure Wine, had no Stool for four Days, his Fancy led him to a Funeral Song, he wou'd be plung'd into Water, lov'd a ruddy Colour, mortally hating what was green, which he wou'd tear in Pieces, and trample under his Feet. In the Night-time he wou'd be scratching his Heels with his Hands; by which means he was somewhat dispos'd to sleep. He eat little or nothing, but dancing almost a whole Week, was perfectly cured by Sweating and Musick. This History I have taken out of *Epiphanius Ferdinandus*, his 17th Observation, principally with this View, that the Symptoms of this Poison might be set in a clearer Light to be farther discover'd.

HISTO-

## HISTORY VIII.

'Tis a Maxim, *In rebus Physicis affigenda sunt potius Pondera Credulitati, quam addenda Pluma.* In Matters of Physick, Credulity shou'd have its Wings clipped, rather than be help'd to fly. One of the Physicians of *Naples* thinking very seriously of this not long ago, thought he ought not to give any Credit at all to the so much talk'd-of Effects of the *Tarantula*, unless he made Trial of the Matter upon himself. Whereupon some *Tarantula* being brought to *Naples* from *Apulia*, in the Month of *August*, 1693. he put two of them upon his Left Arm betwixt his Shirt and his Skin, before six Witnesses and a Publick Notary. It was not long before he was stung, and he found a Prick like that which is made by an Emmet or Fly, and at the same time a Pain in the jointing of the Ring-Finger of the same Arm. Next Day the Part that was stung grew reddish, and there was round about it a blue and yellow Circle: The third Day the yellow Circle swell'd, with a Continuance of Pain; the fourth Day the Swelling of the said Circle went off, and the Part that was stung continu'd of a Colour somewhat red and bluish, but he scarce felt the Pain. Thus the Disease held without any fresh Onset of Symptoms for fifteen Days: The fifteenth Day, a black Scurf grew over the Part that was stung, which being taken off, another came upon it, and then also the yellow and blue Circle appeared. A Month after the stinging, the Patient was seiz'd with a slight Weakness, which I do not know whether to attribute to the Virulency of the foregoing Disease, or to other occult Causes. Soon after he went home to his own Country to retrieve his Strength, and return'd to *Naples* three Months after, where he

now



now lives, and does very well. The seventh Day after the stinging the *Tarantula* dy'd. From this History, which was imparted to me by my very good Friend Dr. *Bulifonius*, we may gather, that a *Tarantula* transported to foreign Counties does not produce fatal Symptoms by stinging; and that the Heat of such Countries is not active enough to elevate the Venom to a due Pitch.

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## C H A P. XII.

*Some things propos'd by way of Doubt, concerning the genuine Nature of this Poison.*

**T**IS the common Quality of all Poisons, to display their whole Force suddenly, and with a violent Fury, upon the Life of Animals; and this they do not with a bulky, but in a small and sometimes unperceivable Quantity. Generally Poisons operate either by curdling or dissolving; and some things inoffensive to Beasts, are fatal to Men, and *è contra*. So that 'tis not the Activity of the Poison, and a venomous Quality in the Substance that's requir'd for doing the Injury, so much as a particular Disposition and Analogy of the Pores in the Parts of an Animal, proportion'd so as to receive the Poison. *Scaliger, Exerc. 33. §. 2.* gives an Instance of a Reaper, that being heated under the scorching Influence of the Sun, and extreme Thirsty, drank some Cupfuls of Water in the Height of his Heat, and fell down dead soon after. Now in this Case the Water was like Poison; for the Humours being mightily rarify'd by the Heat of the Sun, were so dispos'd, that as soon as it join'd 'em, its Chilness produc'd an im-

mediate

mediate and fatal Coagulation. And I have prov'd at large, in my Book of *Mechanica Medicinalia*, that Pleurifies, Quinseys, and such other Diseases, proceed from sudden Cold by the same Mechanical Contrivance.

In corrosive Poisons, we observe that their edged and cutting Particles corrode and dissolve the solid Parts, and curdle and coagulate the Fluid. The Effect upon them both is the same, namely, Solution; which in the Fluids is Coagulation, and in Solids Corrosion. When the Virulency of the Pox first seizes a Man, it produces congealing Effects, as we may gather from the Buboes, Nodes, Stiffness in the Joints, &c. But when the Disease advances, and the venomous Matter is much exalted by repeated Circulation, it produces dissolving Effects, such as Rottenness in the Bones, piercing, boring Pains in the Parts, Leanness, Fevers, &c. And this gives us to know, that the Production of one Symptom more than another requires a particular Disposition in the Body for receiving the Venom.

The *Tarantula* breeds in *Puglia*, the most parch'd Country of all *Italy*; and as the Constitution of a People is always of a piece with the Temperament of their Climate, so the Natives of this Country are of a very hot Constitution, impatient, and very much subject to acute and inflammatory Diseases; from whence we make an obvious Inference, of that vehement Volatilisation of the Juices, that is sometimes so observable in the Blood of the *Apulians*, that the subtiler Part being exhal'd, there remains nothing but an earthy fix'd Part, which readily breeds hypochondriack and melancholick Disorders. So that whether we consider the Temper of the Inhabitants, the Nature of the Climate, or the Disposition of the poisonous Animal, we'll find in all of 'em the highest Activity,



vity, Volatilisation, and Impetuosity, which may serve to direct us in forming an Opinion of the Nature of the Poison of the *Tarantula*.

Upon a narrow and attentive Scrutiny, we'll find that the Nature of Poison deriv'd either from mad or virulent Animals, consists in a Composition of too active, volatile and rapid Particles, which being mix'd with the Blood, scour over all on a sudden, and by raising a violent Commotion, dissolve the mutual Bond of the constituent Parts of the Blood, upon which all the Parts being left to their own Tendency, and falling off on all Sides, the Coagulation takes place; which shews it self in Anguish at Heart, Speechlessness, Oppression of the Pulse, Blackness of the extreme Parts, and such other Symptoms. To this purpose is the Observation of *Benivenius*, mention'd in his *Histor. cap. 56*. *I had a Servant, says he, that being stung by a Scorpion, was seiz'd with such a sudden and cold Sweat all over his Body, that he complain'd of being wrapt in the coldest Snow and Ice; but he was presently cur'd by a Dose of Venice Treacle in strong Wine.*

This Advance is further confirm'd by many Observations made upon mad Animals. Though Man is void of all Poison, yet sometimes his Spirits are so exalted and irritated by Anger, as to assume in a manner a venomous Nature; for if in that actual Fit of Anger he happens to bite one, a venomous Madness has been known to ensue. This is more manifest in Dogs, Cats, Wolves, Mules, and such other Animals, provok'd to Anger, which turn thereupon mad, and communicate a venomous Madness by their Bites. It can't be alledg'd, that these Animals had Poison lodg'd in their Body before, since all the Force of their Venom consists in the raising of the Humours and Spirits to the highest Degree of Exaltation and Rage. In July 1691, I saw a Mule at Padua that turn'd

turn'd mad, either thro' an over-bearing venereal Turgency, or thro' the violent Heat of the Summer; and springing out of the Stable, threw down a Man, whom he bit in several Places of the Arm and Neck, and kick'd with his Heels; upon which the poor Wretch died a few Hours after: but before he dy'd, he grew mad, and run at the People about him with Intent to bite 'em.

The excessive Activity in the Blood and Climate of the *Apulians*, is further confirm'd by this Remark, That there's a greater Frequency of melancholick and mad People in *Puglia* than in any other Country of *Italy*; which gave Occasion to the erecting at *Naples* that celebrated and great Hospital of incurable Persons, in which great Numbers of Madmen are kept. A further Confirmation may be taken from the great Frequency of mad Dogs, whose Madness is justly attributed to the scorching Heat of the Air. But such is the Divine Bounty, that those who are bit by mad Dogs are speedily cured by repairing to the Tomb of *St. Viti*, about 40 Miles from *Lecce*, where the Intercession of that Saint procures 'em a favourable Return from the Almighty.

Now this high Exaltation of the Venom, or the raging Fury of the Spirits rais'd to a venomous Pitch, which we have ascrib'd to other Animals, may justly be attributed to the *Tarantula*, as the sole Fund of its Venom. The *Tarantula*, and other Spiders, are generally placed by Authors among poisonous Animals; And though *Harvey, de Gener. Animal. exerc. 57.* says, he could observe no Difference between a Prick made in his Hand with a Needle, and another made with the Sting of a Spider; yet *Dr. Lister, de Insect. Angl.* says there is this Difference, That the Place which receives the venomous Puncture gathers it self in a Knot, and assumes a Redness, Heat, and Inflammation,



mation, as if 'twere preparing to expel the nocive Poison.

But tho' all Spiders are venomous, and their Bites are pernicious, yet those are more venomous which breed in very hot Countries; as it appears from the *Tarantula* of *Puglia*, and the Scorpions both of that Country and of *Africa*. For the Humours of the *Tarantula* being raised to the highest Pitch of Exaltation by the fiery Heat of the *Apulian* Air, 'tis no wonder if that Animal degenerates to a venomous Madness, as other Animals are wont to do. And hence 'tis that the *Tarantula*, which frequents the Mountains upon the Confines of *Apulia*, is inoffensive, and its Bites do no harm in the Winter: Nay, if you transport a *Tarantula* to foreign Countries, it shall do no harm in biting or stinging; because, in such Countries, and in such a Season of the Year, its Humours cannot be heighten'd to the due Pitch of Venom.

This Venom therefore, in respect of it self, must consist in the highest Degree of Exaltation; but with respect to the Diversity of the Constitutions of Men, it produces various Effects. Among which, the principal are Condensation, and Coagulation, and an Oppression of the Spirits; these being sufficiently manifest in the Anguish at Heart, the low Pulse, the Difficulty of breathing, the black or livid Colour of the Face and extreme Parts, the Coldness of the whole Body, the Swelling, Numbness, Pain, and Inflammation of the Part affected, the Cure of the Disease compass'd by the Spirit of Wine impregnated with Rosemary Flowers, or the Essence of Rosemary Flowers, Sweat procured by violent Leaping, the continual Pains of the Head and Bones, Swoonings, Inap-tency, Fear of Suffocation, and a thousand other Symptoms, that appear in the ensuing Years after the Person is stung. Whether this Condensation  
proceeds

proceeds from the acid or the alkaline Parts of the Poison, let better Heads determine. This I am sure of, that some Alkali's are endow'd with the Virtue of dissolving, and others of curdling; and the most judicious Authors say the same thing of Acids; so that in so doubtful a Case, 'tis not Speculation, but Experience and Trial that can find out the Truth. I wish Physicians wou'd spend less Time in these fruitless Speculations, upon the Consideration that the first and immediate Causes, and the smallest Properties of natural things, are involv'd in Obscurity, and brought to Light with the greatest Difficulty.

The Poison of the *Tarantula* is not elevated to so high a venomous Degree as that of Vipers; but it goes far beyond it in the violent Motion of its constituent Parts, and the other Qualities of Motion: So that *Willis, cap. 7. de Morb. Convul.* said justly, That the Poison of the *Tarantula* mix'd with the nervous Juice, is too mild quite to extinguish and sink the animal Spirits, or to disperse 'em entirely when they are distracted; and that it only puts them to flight, and then excites 'em to slight Convulsions, that have scarce any worse Symptoms than Pain.

And tho' the Poison of the *Tarantula*, by the Activity of its virulent Substance, does almost dispose the Humours to Coagulation; yet, by vertue of the brisk and lively Motion of its constituent Parts, it hinders, in some measure, the total Coagulation of the Humours, and by giving a Fillip to the Spirits and Humours, prevents their final sinking. Nay, sometimes such is the Agitation of the Spirits, that they degenerate into involuntary and purely spasmodic Motions; and accordingly some Persons stung by a *Tarantula*, are thereupon seiz'd with violent Convulsions, Shive-



rings, a Looseness, and many other involuntary Motions.

I leave the impartial World to judge, whether these doubtful Advances of the Nature of this Poison are true, or at least likely. This I must confess, that I take more Pleasure in observing the standing and constant Motions of Nature, relating to the Diagnosticks, Prognosticks, and Cure of Diseases, than in such idle and fleeting Speculations, which last only till they are jostled out by an opposite Notion. Upon which Head, *Cicero de Nat. Deor.* said well, *Opinionum Commenta delet Dies, Naturæ Judicia confirmat*; (i. e.) Time overturns the Fictions of Opinion, but it confirms the Judgments of Nature.

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### C H A P. XIII.

*A brief Enquiry into the Effects of Musick, in this and other Diseases.*

ALL the World knows, how wonderful and various the Effects of Motion are; Generation, Corruption, and all sublunary Alterations are the Product of Motion: Whatever lives, whatever grows, and whatever undergoes the sensible Mutations of Life and Destruction, is in a perpetual Motion. 'Twas from this Consideration, the wiser Sort of Philosophers made Motion and Matter the two grand Principles of Things. And considering that the Operations of Motion are performed by the Contact of Bodies, 'tis no wonder that the slightest Impressions of Motion produce admirable Effects, by communicating the *Impetus* of the Contact to the very remotest Parts; as *Borelli* has demon-

demonstrated in his golden Book *de Vi Percussionis*. Tho' gouty People are unfit for all manner of Exercise, I am of the Opinion, that constant Conversation with their Friends, or the reading of Books with a loud Voice, may do 'em the same Service with Exercise; for in speaking, the Muscles of the Mouth and adjacent Parts are contracted and exercis'd; and by vertue of that Contraction, the Expression and Circulation of the Liquids that lye within the Verge of Contact, is performed with more Expedition and Facility; and thereupon all, even the remotest Liquids, circulate with greater Velocity. That speaking loud, as well as singing, is justly reckon'd among the Kinds of Exercise, is manifest from the excellent Words of *Plutarch*, in his Treatise *de tuend. bon. val.* It may be alledg'd, (says he) That 'tis needless to prescribe Exercise of the Body for Students, upon the Plea, that their daily vocal Disputes are an admirable Sort of Exercise, conducive not only for Health, but for the Strength of the Body; not that Strength that beats out the Muscles and bends the Skin, but that which gives an internal Force, a genuine Vigor to the vital and more principal Parts. And indeed, considering that Voice is not a slight and superficial Agitation of the Spirits, but that which reaches the very Fountain and Viscera, which increases the Heat, subtilises the Blood, purges the Veins, opens the Arteries, digests the Aliment, keeps the superfluous Humours from growing thick, and sinking like Dregs in their Receptacles; upon these Considerations, I say, Students ought to accustom themselves to this Sort of Exercise. And hence it comes to pass, that religious Persons who live in Cloysters are very healthful, notwithstanding they use but little Exercise; for they employ themselves Night and Day in Choirs, in singing the Praises of God, and pouring forth Prayers, com-



penfating thus the Motion of their Body with the Exercife of the Voice ; by which Means they digest well, and enjoy a longer State of Health than other Men. 'Twas with the fame View that *Aſclepiades* cur'd Diſeaſes with a hanging Bed, in order to *extenuate Diſeaſes* (as he call'd it) by moving and exerciſing his Patients in ſuch a Bed ; and in travelling through *Dalmatia*, I was inform'd that ſome of the *Dalmatians* retain that Method of Cure to this Day. To be carry'd in a Coach or a Chair, is likewise a Sort of Exercife ; tho' the Body is not much ſhak'd by that Exercife, yet the new and continual Impulſe of the Air upon the Body, and that Motion, as gentle as 'tis, promotes the Courſe of the Humours, increaſes Tranſpiration, and clears the Body of Excrements. I conclude therefore, upon the foregoing Reaſons, that gouty People ought to apply themſelves often to the Exercife of the Voice, and riding in a Coach. This I have mention'd with Intent to ſhow, how great Effects may flow from a ſmall Motion, and give a clearer View of what I am about to advance concerning the Effects of Muſick. Muſick is one of thoſe Motions that ſmartly ſtrikes the Air, and diſpoſes it to brisk Undulations. Now theſe Motions, or ſwift Undulations, being communicated by Contact to the Blood and Spirits, make different Impreſſions upon 'em ; ſometimes by exciting them to Motion, ſometimes by compoſing them to Reſt ; and the Variety of Sounds raiſes various Ideas of things in our Minds, ſo that ſome Conſorts inſpire us with Courage, others with Cheerfulneſs, and others again with Piety, according as the Spirits and Humours are affected. The violent Motions rais'd in the Spirits of Soldiers by the Sound of Drums and Trumpets, are evident from their Boldneſs, Alacrity, and Readineſs to under-

go Danger, and their eager Warmth in engaging the Enemy. Those who are sorrowful, angry, or affected with other Passions of the Mind, are excited to Chearfulness and Joy, by the gentle and agreeable Harmony of Musick, and by the Continuation of the same are lull'd asleep.

That the above-mention'd Undulations of the Air have an Influence upon the solid and fluid Parts of the Body, is manifest from the various Examples of Brutes, as well as from the grating of the Teeth. A great many are so affected with the disagreeable Undulation of the Air occasion'd by the Motion of a File or a Saw, that their Teeth grate, and are uneasy; and that because the Particles of the Air thus mov'd, being disproportion'd to the Pores of the Nerves inserted in the Roots of the Teeth, do so distort and twitch 'em, that they are either benumb'd or affected with Pain. Further, all of us are sensible that upon hearing an unwonted and agreeable Harmony of Musick, we feel first a gentle shivering over the Skin, and a Sort of Erection of the Hair. Several Authors testify, that Brutes are likewise affected with the Sound of Musick. *Strabo* affirms, that angry Elephants are appeas'd with Musick, that Bees are delighted with the Sound of Metal, Swans with a Harp and Singing, and Dolphins with Musick. I have seen my self a Dog at *Ragusa* in *Dalmatia*, that was such an Enemy to the Sound of the Harp, or any other Musical Instrument, that upon hearing it, he fell a howling and almost a crying.

*Alexander de Alexandro* gives yet a more curious Instance, in his *Dies Geni. lib. 6. cap. 5.* where he acquaints us that *Theophrastus* affirm'd, That Musical Instruments harmoniously touch'd, would cure the Bites of Vipers. *Asclepiades* made the same Remark; affirming, that frentick and brain-sick Per-



sons are restor'd to their Wits and their Health, by nothing more than by the Harmony and Confort of Voices. 'Tis said likewise, that *Ismenias* the *Theban* cur'd several Persons of the *Sciatica*, by playing on the Flute or the Harp. See more of this Nature in *Aldrovandus de Insect. lib. 5. fol. 621.*

It being manifest from the Premises, that Musick ravishes healthy Persons into such Actions as imitate the Harmony they hear; we easily adjust our Opinion of the Effects of Musick in the Cure of Persons stung by a *Tarantula*. 'Tis probable, that the very swift Motion impress'd upon the Air by Musical Instruments, and communicated by the Air to the Skin, and so to the Spirits and Blood, does, in some measure, dissolve and dispel their growing Coagulation; and that the Effects of the Dissolution increase as the Sound it self increases, till, at last, the Humours retrieve their primitive fluid State, by vertue of these repeated Shakings and Vibrations; upon which the Patient revives gradually, moves his Limbs, gets upon his Legs, groans, and jumps about with Violence, till the Sweat breaks and carries off the Seeds of the Poison.

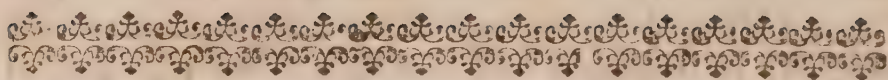
Nor is it wonderful, that Musick should have so great a Virtue of dissolving the venomous *Coagulum* of the Spirits and Humours, considering that it chiefly and immediately affects the Organ of hearing, that lies very near the Brain; and affects even the Brain it self, or the minute or fine Fibres in which the Spirits lye drooping and almost sunk, till the continual and forcible Contact of the Musick makes them march out upon the Membranes of the Brain; upon which having partly recover'd their Motion, they enter with greater Facility and Agility into the little Tubes of the Nerves and Fibres, and so recover their former Correspondence

dence with the Humours and solid Parts. The Force of the Air thus mov'd by the Impulse of the Musick, is increas'd and quicken'd by the ardent Heat of the Sun, and of the thin Air of *Apulia*; so that the Sound strikes the System of the Spirits, Humours, and Nerves, with more Violence; and its greater and more violent Impulse raises a Fermentation in the Humours, and restores them to their due Pitch of Exaltation and Fluidity. Now all these Effects can't be compass'd by Diaphoreticks taken inwardly, as intimated above; for before such Medicines can reach the Blood, their Force is in a great measure impair'd; and besides, they operate only upon the Fluids, and not upon the Solids: Whereas the musical Sound affects at once both the Solids and Fluids, and that very forcibly, and by vertue of its Percussion upon the small Fibres of the Brain, in which the Secretion and Distribution of the nervous Juice is immediately perform'd.

This, Reader, is what I thought fit to communicate to thee concerning the *Tarantula*.

Nov, 13. 1695.





# DISSERTATION II.

OF THE

USE and ABUSE

OF

## Blistering - Plaisters.

*The* P R E F A C E *to the* Reader.

I Perceive the very Title of this Dissertation will provoke many of our new physick Sectaries in Italy to fall upon me with Invektives; to cry out, *What does this Galerical Spark mean? This Man that's altogether unacquainted with the new Method of Practice? To what purpose does he teaze us with the vain Ostentation of the Ancients? But if these Gentlemen will but peruse the two foregoing Books of Practice, they'll be sensible I am not the Man they took me for. I stand up for the Liberty of Physick, and am ty'd neither to the Ancients nor the Moderns: I follow both, where Truth is their Guide; and, like a Refiner of Metals, pick the Gold and Silver of Precepts out of the Dross both of the modern and ancient Physick. In Imitation of the Coans, I adore repeated Experience, and desire nothing*

nothing more earnestly, than that Physicians would improve themselves like the reviving Offspring of the Heroes of that School, and lay aside their lazy Despair in the way of Inquisition; that they would keep up, as much as they can, the Majesty and Weight of Nature, and apply themselves with Diligence to the Illustration of Physical Matters. To come to Blistering-Plaisters: The Arabians invented them with Intent to rouse up Persons affected with sleepy Diseases, such as a Lethargy, an Apoplexy, &c. But the Physicians of those Times were altogether ignorant what Mechanism their Virtue was founded upon, and what other Diseases they were proper for besides those above-mention'd. The Doctors that came after, contenting themselves with the Name of Revulsion that the Arabians gave 'em, and being ignorant of the mechanical Way of this Revulsion, went rashly on in the Dark, and, pursuant to the lucky or unlucky Event of Blistering-Plaisters, were split into two Factions; the one recommending, and the other disproving the Use of such Remedies. In this our Age, Helmont, either forgetting or contemning the Footsteps of Nature, has disputed very warmly against the Use of Blistering-Plaisters, and gave Being to a Sect that rejects these as well as the other Remedies of the Galenists. And indeed I was for a long time of their Mind, till I was taught by observing in many Hospitals of Italy, the Progress, History, and Effects of Diseases, that Blistering-Plaisters are sometimes very serviceable. Being thus undeceiv'd, I discarded their Opinion; and throwing off the Shadow of Prejudices, that I had taken from the reading of new Books and the Authority of Precepts, I apply'd my self wholly to a Scrutiny of the Advantages and Disadvantages of Blistering Medicines. At the same time I made a Trial upon live Animals, by infusing into their Blood the Tincture of Cantharides, and applying Blistering-Plaisters to their Skin after 'twas shav'd smooth: And



having thus made a great many Observations, both practical and anatomical, I tack'd 'em all together for my own Use; and when these fell into the Hands of some learned Physicians of this City, they requested me to publish 'em in Company with the foregoing Tracts. For my part, I took the Subject to be invidious; and fearing all the new Doctors would fall upon me in a Lump, declin'd it for a long time: But at last, being overcome by their Solicitation, and encouraged by a Treatise de Stimulis, lately set forth by my learned Friend Dr. Bellini, I pick'd out what seem'd to be most useful, and drew 'em up in the four ensuing Chapters.

As I offer 'em candidly to the Reader, without leaning either to the new or the ancient Sects; so I expect the Reader, after an accurate Survey, will either comply where he finds me in the right, or correct my Mistakes.

Rome, March 15.  
1696.

## CH A P. I.

### *Some Experiments of the Effects of the Cantharides.*

PRACTITIONERS have argued very warmly against one another upon the Use of Blistering-Plaisters, some approving and some disproving 'em. This Contention is owing either to the private Feuds occasion'd by the Diversity of Sects, or other Causes, as that between the *Hellmontists* and modern *Galenists*, and the like; or else to the

customary way of judging of the Effects of Blistering Plaisters, not so much from the Nature of the Thing it self, as from Opinion and receiv'd *Hypotheses*. 'Tis no wonder, that those who act so inconsiderately, and never think what the Variety of Place, Temperaments, Causes, and Ages requires; 'tis no wonder, I say, they should fall into Mistakes and deplorable Divisions. For my own share, pursuant to my wonted Custom of tracing the Footsteps of Nature, I shall here briefly lay down what I observ'd with Patience upon this Head in several *Italian* Hospitals. And while I vent nothing but what is true and of Use to Mankind, I am under no manner of Concern for the sinister Construction of others.

## EXPERIMENT I.

*Rome, May 1692.* I ty'd a Mastiff-Dog upon a Table, opened his right Jugular Vein, and injected with a Syringe two Ounces of the Tincture of *Cantharides*, which I had made by taking two Drams of the Powder of *Cantharides* to six Ounces of the Water of *Carduus Benedictus*, and digesting them three Days upon Ashes. Upon the Beginning of the Injection, the Dog vomited up watery and slimy Matter, and voided at Mouth a viscid Sort of Spitile, till I had finish'd the Injection of two Ounces, and sew'd up the Wound and sprinkled it with burnt Vitriol. This Operation was no sooner over, than he fell down as if he had been dead. He refus'd to eat to the last Minute of his Death, and was extreme thirsty; insomuch that my Servant, mov'd with Compassion, gave him, without my Knowledge, about six Quarts of Water, which he drank, and presently voided a great Quantity of yellow Urine. In the mean time he howl'd,



howl'd, and continued miserably thirsty ; but we gave him no more Water. Before his Death, he was seiz'd with Convulsions. He died, after miserable Howlings, the fourth Day at Night.

Having opened his Carcase, I found that Part of the Neck, upon which we had made the Experiment, was perfectly mortified and fœtid. In the right Ventricle of the Heart, the Blood was very black and copious, with little or no Coagulation, and some Drops of Oil, as 'twere, upon the Surface. We found there a small Polypus continuous to a Clot of Blood. In the left Ventricle of the Heart we found two little Polypus's, and the Blood dissolv'd, but extreme black. The Lungs and the other *Viscera* were sound. In the Urine-Bladder we found not the least Bit of that slimy Matter that naturally guards the Inside of it; perhaps the Acrimony of the *Cantharides* had gnaw'd it off. The Gall in the Gall-Bladder was somewhat black. The Blood that ouz'd out upon the cutting of the Veins of the *Viscera* was very black, without any Coagulation, and cover'd with little Drops, like Oil, on the Surface.

## EXPERIMENT II.

Rome, July 14. 1692. I ty'd down upon a Table a young and indifferent big Dog, and injected into his right Jugular two Ounces of the Tincture of *Cantharides*. The Wound was no sooner sow'd up and dress'd as above, than the Dog vomited, and fell down half dead. Two Hours after he held out his Tongue for Thirst, with a great deal of Anxiety. He would not eat, and was extreme thirsty ; but I allow'd him no Water. Six Hours after, he expir'd with grievous Howlings. Having open'd the Carcase, I found all the *Viscera* sound ;  
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but the Blood was very black and dissolv'd, and cover'd in the Surface with little Drops like Oil. The Dog being young, and not very big, and no Water being allow'd him, the Humours were soon dissolv'd and melted down by the caustick Salt of the *Cantharides*, so that he dy'd in six Hours.

In both these Dogs, I observ'd upon injecting the Tinctures, that no Part was so soon affected as the Head; for presently it nodded and drooped downwards, so that the Creature could not hold its Neck straight. The first Dog hung down his Head immediately upon making the Experiment, and could scarce raise it; but as soon as he drank the six Quarts of Water, he got to his Legs, rais'd up his Head, and look'd brisker. But as soon as the Water was voided by Urine, he fell down again, and never rais'd his Head more; and died on the fourth Day, half stupid and reeling. From whence an Inference may be drawn, that the *Cantharides* are chiefly nocive to the Head, and so ought to be carefully avoided in the inflammatory and acute Disorders of the Head: But this is not to be absolutely asserted, till it be confirm'd by Hundreds of Instances.

### EXPERIMENT III.

Rome, April 14. 1692. I took eight Ounces of Blood just drawn from the Vein of a Patient, and divided it into two Vessels; in one of which I put a Scruple of the Powder of *Cantharides*, without mixing any thing with the Blood in the other. The Blood mix'd with the Powder was sooner coagulated than the unmix'd, and afterwards assum'd a Lead-Colour and a blackish Surface. After some time, a great Quantity of little Bladders appeared all over the Surface; and when they broke,



broke, voided a blackish *Serum*. At last all the Blood mix'd with the *Cantharides*, dissolv'd into a blackish and livid *Serum*; but that in the other Vessel suffer'd no such Changes.

#### EXPERIMENT IV.

*Rome, April 1692.* I took the Blood drawn from a Patient, and parting the *Serum* from the Blood, mix'd with the *Serum* a Scruple of the Powder of *Cantharides*. Soon after the mixing, the Powder precipitated to the Bottom of the Vessel, without tinging the *Serum* with any Colour; only the *Serum* became a little more liquid and thin, and scarce coagulable. Now, to set this Matter in a clearer Light, I shall here subjoin three Observations made upon Patients that had Blistering-Plaisters apply'd to 'em.

#### HISTORY I.

A young Man of twenty two Years of Age, of a bilious Temperament and thin, and cur'd not long before of venereal Bubo's, expos'd himself to the *Northery* Winds after he had been very hot before a Fire, and thereupon was seiz'd with a *Quinsy*, which soon after terminated in a *Pleurisy*, with a dry Cough, a very fiery febrile Heat, a hard and high Pulse, Watchings, Thirst, thick, gross and very high-colour'd Urine: He lay in an *Italian Hospital*.

When I saw him first, 'twas the twelfth Day of his Illness; and then his Physician prescrib'd him the Powder of *Cornachini*: Next Day he apply'd six Blistering-Plaisters to his Body, which was very meagre. The fourteenth Day he was seiz'd with a Delirium, a Suppression of Spitting, a Trembling

bling in the Flesh, Epileptick Motions, an unequal Pulse and Respiration. He voided great Quantities of Urine, and bilious stinking Stools, without any Abatement of the Symptoms. The sixteenth, all things assum'd a milder Face; but the next Night they renew'd their Rage, with a most copious, universal and glutinous Sweat, that had an acid Smell, and continued to the 21st, on which the Patient expired.

## HISTORY II.

A Cook of thirty Years of Age, with a sanguine and bilious Constitution, red Hair, and a violent Propensity to Venery and Drinking, was seiz'd, after a great Heat and Cold catch'd upon it, with Convulsions of the lower Mandible, and soon after with Convulsions of the Abdomen. In the Hospital they prescrib'd him the Powder of *Cornachini*, and the next Day four Blistering-Plaisters. The Application of these was follow'd by Vomiting, convulsive Motions, and a grievous Difficulty of breathing; under the Pressure of which Symptoms the poor Man dy'd miserably on the fourteenth Day. During the Epileptick and Convulsive Motions, he retain'd the free Use of his Senses, both internal and external. I have frequently seen the Powder of *Cornachini* produce convulsive Motions, in sleepy Diseases arising from a great Wound in the Head: But in sleepy Disorders that spring from other Causes, I have found this Powder very serviceable, especially if the Vessels are eas'd and empty'd beforehand by a thin Diet, or Bleeding if necessary; for the Sleep vanishes immediately after the exhibiting of that Powder. Of this I had an Instance very lately in a Boy of eight Years of Age, that was seiz'd in  
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the Beginning of a Febrile Paroxysm with a heavy Sleep, and continued so for several Hours, till I gave him the Powder of *Cornachini*, which dispell'd the Sleep entirely. There's scarce a better Remedy than this, in Apoplexies, Lethargies, Megrims, and such like Disorders of the Head.

### HISTORY III.

A young thin Woman, eight Months gone with Child, was troubled for eight Days together with Pains in her Belly, and then brought forth a Child. After Delivery the Pains still continu'd, with a notable Distention of the Belly; and having slighted, or rather neglected all manner of Remedies, was advis'd at last, by a Physician, to have four Blistering-Plaisters applied to her. This occasion'd a Suppression of the *Lochia*, which were open before. A few Days after, the *Lochia* return'd, and her Belly began to suffer grievous Convulsions with great Pain, insomuch that she could not bear the Pressure of one's Finger; these were follow'd by cold Sweats, with a Coldness in the extreme Parts, the Pulse and Respiration became very low; and, in a word, she was almost dead. A few Days after, she grew a little better; but was seiz'd soon after, all on a sudden, with a violent and convulsive Difficulty of breathing, which sometimes turn'd to a *Delirium*, and with a yellow stinking Looseness that continued for eight Days. In fine, she dy'd on the seventeenth Day of her Illness.

## C H A P. II.

Of the Inconveniencies attending the Use of  
Blistering-Plaisters.

## §. I.

There's nothing that follows the Application of Blistering-Plaisters so soon as Thirst, with a Driness of the Tongue; which sometimes is so great, especially in Persons of an adust Temperament, and such as are not delirious, that nothing will pacify it, but continual gargling with Water. The Thirst rages thus violently for about three Days; that is, according as the sharp Salts of the *Cantharides* are separated from the Blood sooner or later, or in a smaller or greater Quantity; then it relents by degrees: and this Thirst I call *Sitis Vescantium*. In the Use of Blistering-Plaisters, we ought to be very cautious of prescribing them promiscuously in all Seasons of the Year, and for every Age, Constitution, and Habit of Body, or in every Disease, as the *Galenists* now-a-days are wont to do; for they are only to be us'd when Necessity requires it, and that in the Cases mention'd hereafter. If they're apply'd without due Caution, a great many Evils will ensue, which ignorant Physicians commonly impute to the poisonous and malignant Nature of the Remedy, and not to the erroneous Indications upon which 'tis prescrib'd. I have sometimes seen the Ulcers rais'd by Blistering-Plaisters turn to a Gangrene, or at least be very hard to heal up; but whether the new Constitution of the Air that then reign'd, contributed any thing in this Matter, I am at a loss



loss to know ; only this I must say, I observ'd in the Year 1692, not only at *Boulogne*, but even at *Rome*, that Ulcers from any Cause, and slight Wounds, gangren'd very easily, and sometimes prov'd fatal to Patients, many of whom dy'd in that Season of the gangren'd Ulcers of Blisters. Now the Winter of that Season was very cold, and brought a great deal of Snow and Ice, which in *Italy* is uncommon ; and the succeeding Spring was very cloudy and wet, which was follow'd by a temperate and showery Summer. In this Constitution of the Weather, did Ulcers and Wounds readily degenerate to Gangrenes, to the great Admiration of the Surgeons. We ought therefore, in Imitation of *Hippocrates*, to have an attentive Regard to the general Season and Influence of the Weather, and be very diligent in giving a lively Description of its Nature and Effects. But after all, the Ulcers of Blisters are apt to corrupt and gangrene in any Season of the Year, in such Persons as are Cachectick, Hydropick, troubled with black Melancholy, sickly, or have been formerly maltraiated by the Pox : But this is not observ'd in Persons of a robust Constitution, and of solid built Parts, nor yet in those who have been miserably fatigu'd with tedious Diseases.

## II.

I've observ'd, that those who are severely wounded in the Head, and seiz'd with a Vomiting, an Abolition of the Senses, and other grievous Symptoms of disorder'd Brains, are some of 'em seiz'd with violent Convulsions soon after the Application of Blistering-Plaisters ; some are seiz'd a few Hours or Days after with cold Sweats, which are follow'd by Death : Others die of Convulsions  
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the next night. I remember to have seen one that was violently ill of spasmodick Gripes and Throws in the Belly, with a Fever, and after the application of Blistering-Plaisters in the Hospital voided by Stool a great quantity of reddish Blood, and died soon after. Having thus observ'd again and again, that fatal Convulsions or the above-mention'd Disorders were the consequence of blistering Plaisters applied for grievous Wounds in the Head ; I freely foretold upon all such Occasions what would come to pass, and the Event always verify'd the Prediction. Where-ever you suspect or see Convulsions, abstain altogether from Blistering Plaisters ; especially if they be accompany'd with a Fever, a sharp and colliquative Constitution of the Blood, with a thin Habit of Body, or succeed to previous Watchings, to a spare Diet, or Venereal Evacuations. Such as have been pox'd before, are very much injur'd by Blistering-Plaisters, let the Disease be what it will : So that to such Patients we ought not to apply 'em, unless it be in great Coagulations of the Blood, and sleepy Diseases, and even then with caution. In ardent and continual Fevers, accompany'd with a great Agitation and Impetuosity in the Blood ; in a hot and dry Season, in hot and dry Countries, in hot and dry Constitutions, or such as pursue a hot and dry Diet, or are in the Prime of their Youth ; in nervous Disorders attended with a Fever that leans to the ardent kind ; in the sleepy Symptoms of such Fevers as approach to the ardent kind ; in the spasmodick and inflammatory Disorders of the Breast, and such as proceed from the saline sharp Constitution of the Blood : In all such Cases, I say, I have oftentimes observ'd that Blistering-Plaisters are noxious. And tho sometimes there is a lucid Appearance of Benefit in such Cases, yet being doubtful whether that proceeded from the

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Blisters,



Blisters, or from the other Remedies, I therefore seldom or never did prescribe Blistering-Plaisters in these Cases ; for I us'd happily to compass the Cure with Hypnotick, Diluting and Dulcifying Medicines.

Having occasion above to mention sleepy Disorders ; I must here take notice by the Bye, that in the most ardent Fevers, and those which proceed as 'twere from an Inflammation of the Blood, I have several times observ'd in the beginning of the Invasion a sort of Sleepiness, that increas'd as the Disease advanc'd, and was exasperated by a copious Prescription of dissolving and Cephalick Medicines. Repeated Observation has likewise taught me, that this sleepy Symptom abates of its own accord, when the Disease tends to a Declension ; or if it does not move of its own accord, is easily dispell'd with the Emulsions of Seeds, Waters qualify'd with juice of Lemons, and such like refrigerating Things. This Observation I say is only laid for such Fevers as are extream ardent and proceed from an overbearing Impetuosity in the Blood. Now, the Mechanicks will furnish us with a Reason why the Blood repairing to the Brain with so much Force and Rapidity, occasions a Difficulty both in the Filtration of the Blood and the Secretion of the Spirits ; nay the Circulation of the Spirits being thereby intercepted, their descent to the lower Parts is cramp'd and oppos'd ; and by consequence, the greater Force you add to the Blood, the more you increase the Sleepiness, and *e contra*.

### III.

I have sometimes seen the Application of Blistering Plaisters followed by a sort of subsultory and convulsive Motion in the Tendons, a breaking forth

forth of Sweat, and that very copiously in some Cases, a slow Pulse, &c. and those Symptoms continue as long as the sharp Salts of the *Cantharides* abide in the Blood, and disappear upon their Expulsion, as well as the above-mentioned Thirst, and dryness of the Tongue; especially if the Blistering Plaisters were prescrib'd upon due Indications: for if they are apply'd unseasonably, they are so far from disappearing that they assume fresh Fury. Blistering Plaisters cause frequently, not only a Gangrene, but likewise a pissing of Blood, a heat of Urine, and the other Disorders of the Bladder, especially in a thin meagre habit of Body, in a hot and dry Constitution, in the heat of the Dog-Days, and the like. The pissing of Blood, after the application of Blistering-Plaisters has been frequently observ'd by the learned *Trullius*, and *Manfredus* Professor at *Rome*. But see upon this Head the Learned *Simibaldus*, Professor at *Rome*. Blistering-Plaisters should be cautiously us'd upon thin meagre Bodies; for in such Cases they readily occasion convulsive Motions, and inflame the Fever; and sometimes, when the Fever tends to the *Status* or Heighth, the Application of Blistering-Plaisters will make it renew its Force and inflame the Symptoms. If to such a Habit of Body you join a hot and dry Constitution, the Summer Season, a previous and plentiful Evacuation, and such a State of the Blood as tends to Dissolution and Colliquation, you must avoid Blisters altogether; and that in all Diseases and all Ages, by Reason of the dismal Symptoms that follow the Application. Many of the *Galenists*, who stick too close to their *Hypotheses*, are of the Opinion, That the grievous and disproportion'd Symptoms of Colliquative Fevers, or such as proceed from Dissolution, arise from the venomous Quality of the Fever; and accordingly prescribe four, six, or more Bli-



stering-Plaisters, in order to fetch out the Venom. But I have always observ'd, That the Application of Blistering-Plaisters, in such Cases, is follow'd by Convulsions, Imposthumes in the *Viscera*, a greater *Delirium*, a considerable Increase of the Fever, and at last by Death it self; by reason of the Mass of Blood, its being more and more dissolv'd by the caustick Salt of the *Cantharides*, and the sharp Matter of the Fever. Those who are delirious with an acute Fever, and a parched Tongue, die quickly upon the Application of Blistering-Plaisters; and most of them are seiz'd with Convulsions before they die. These repeated Observations made in Hospitals scar'd me so much, that in this last Case I always confided (and that without Disappointment) in diluting Remedies, refrigerating Emulsions, and Bleeding in the Vein of the Forehead. Sometimes Blistering-Plaisters inflame a *Delirium*, or hasten the Arrival of an imminent *Delirium*, by Virtue of the great Pain they occasion. I have been told by a creditable Physician, That a Piece of Bread taken just out of the Oven, apply'd very hot to any part of the Body, will raise Blisters in half an Hour, and make Ulcers like a Blistering-Plaster; and that if this Ulcer and Crust be not well taken Care of at first, 'twill be a hard Matter to cure it afterwards. The excessive Use of *Cantharides* raises a filthy *Satyriasis*; two fatal Instances of which are recorded by *Cabrolins*, *Obs. Anat.* 17. And for that Reason I would also advise Physicians to apply Blisters cautiously to salacious Persons.

## IV.

I have seen more delirious Persons dye upon the use of Blistering-Plaisters, than ever I saw recover. Oftentimes the Application of Blisters stops a loose Belly,

Belly, and turns a high Pulse to a low one. The Acid of Vinegar corrects and fixes the volatile Caustick Salt of the *Cantharides*; and therefore if you want to have strong Blistering-Plaisters, add a little Vinegar or stale Yest, or instead of these, the Plaister de *Mucilaginibus*, or the like. There's nothing that makes the Ulcers of Blisters so ready to gangreen, as the putting too much *Cantharides* in 'em; for the *Cantharides* being very light, inso-much that 50 of them will scarce weigh a Dram, mistakes may readily happen in prescribing their Dose; and for that Reason they ought always to be prescrib'd by Number, as Six or Ten, &c. and not by Weight. The *Cantharides* taken inwardly either against a desperate Suppression of Urine, or against a virulent Clap, or in order to excite Venery, are wont to produce dismal Symptoms. Soon after they are taken, the Bladder and urinary Passage is ulcerated, then the Liver is gradually inflam'd, the Intestines are corroded, and the *Hypogastrium* is infested with violent Pains, which are follow'd by a *Delirium* and Death, without the *Cantharides* be immediately expell'd, weakened or clog'd: See upon this Head *Francis Joel*, who lays down a prudent Scheme of Cure. According to *Langius, Epist. 7. Lib. 1.* the Antidote for *Cantharides*, is Milk, whether native or artificial. I've observ'd that Blistering-Plaisters are useless, and even hurtful, in Men of an adust bilious Constitution; for besides that the blister'd Part is violently inflam'd, and flea'd, with a prodigious Pain, and a small Evacuation of *Serum*, and sometimes none at all, the Bladder is seiz'd with a most violent Strangury: So that considering the Blood of such Constitutions is plentifully stock'd with Salt and Sulphur, and diluted with little *Serum*, 'tis necessary to back the Use of Blistering-Plaisters with large Quantities of diluting Me-



dicines, in order to prevent the Disorders mention'd but now. And thus I have briefly run through the Inconveniencies accruing from the Application of Blistering-Plaisters, that fell under my Observation in the Hospitals. I proceed, in the next place to the Advantages that accompany them.

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### C H A P. III.

*Of the Advantages redounding from the use of Blistering-Plaisters.*

#### S E C T. I.

**T**H O' the Disorders mention'd in the last Chapter are the Product of Blistering-Plaisters, yet these ought not to be banish'd the Republick of Physick for good and all; for they are like all other Remedies. Wine, we see, intoxicates and disorders the Head very much; and yet the Governors of Societies do not prohibit it, because those dismal Effects are owing not to the poysonous Quality of the Wine, but to the Indiscretion of Mankind. In like manner, as Blistering-Plaisters are noxious in a sharp and melting Constitution of the Blood, so they are beneficial in a gross and viscid Disposition of the Blood, that tends to Coagulation and Stagnation. In Fevers accompany'd with a very low Pulse, a Coldness in the extream Parts, Anxiety, a Propensity to sleepy Disorders, and other Marks of Coagulation, 'tis incredible what Benefit is reap'd from Blisters, especially if you joyn to these Symptoms the Winter-Season, a moist Constitution, or a Tendency

dency that Way, a fat Habit of Body, and the like. For the sharp Salt of the *Cantharides* being communicated to the Humours thus dispos'd to Coagulation, disjoins their Parts, and disposes them for their primitive Fluidity. In a word, we have not such an effectual and quick Remedy, as Blistering-Plaisters, for dissolving the commencing Coagulations and Stagnations of the Blood in any Disease, Age, Constitution, or Season of the Year whatsoever. And this has the greater Appearance of Truth, that it agrees exactly with the Sentiments of the *Arabians*, who first invented them. For they never us'd 'em but to rouse out of sleepy Disorders, and animate those who were refrigerated by an Illness; as it appears from *Oribasius*, the first *Arabian* Author that writ of 'em; and they abstain'd from 'em altogether, when there was no Necessity of dispelling Sleep or Chillness. But the Physicians of succeeding Ages have follow'd other Measures; being buoy'd up with a false Opinion, that Blisters draw out the Venom of Malignant Fevers, they prescrib'd 'em promiscuously against all Fevers whatsoever, to the great Detriment of their Patients; as I made it to appear in the last Chapter. In a Pleurisie, whether with, or without previous Bleeding, I've observ'd on the fifth, or seventh, or the other Days that lye between, a great and ominous Difficulty of Breathing and of Expectoration; which was taken off to a Miracle, by applying two Blistering Plaisters to the Legs or Ancles. Nay, I'll go yet farther: If a Difficulty of Breathing and Spitting happens on any Day whatsoever after a Pleurisie, presently apply two Blister-Plaisters to the Legs. *Hippocrates* was of the same Opinion, *Lib. 2. Progn. 67.* In the inflammatory Disorders of the Lungs (says he) all Swellings upon the Legs are a good Omen; nay, a better thing can't happen, especially if they appear



when the Spitting is alter'd. I solemnly protest, that very few died out of Hundreds that were treated after this Manner, by a very learned Physician in a famous Hospital : And this I observ'd chiefly at Rome, in the Winter of 1694, at which Time Epidemick Pleurifies were very brief, by reason of the rigid Cold occasion'd by such Plenty of Snow and Ice. For the sharp Salt of the *Cantharides* being introduc'd into the Mass of Blood, and so to the Lungs where the Stagnation was dreaded, it presently dissolv'd the growing Coagulation, and restor'd the Humours to their former Circulation ; it lessen'd the Difficulty of Breathing, and promoted the Egress of Spitting to the great Ease of the Patient. In the mean time, take notice, That the pleurittick Persons who reap'd this Benefit were not purg'd in the Beginning, as some Practitioners would have 'em, but had seasonable Bleeding prescrib'd with nothing else but pectoral Decoctions and gentle alkaline dissolving Remedies, in the Progress of the Cure. I remark'd that if any Looseness accompany'd the Pleurisie, 'twas either check'd or quite stopp'd by the Application of Blistering Plaisters, to the great Benefit of the Patient. Sometimes the Application was follow'd by a copious Evacuation of Urine, which gave great Ease, as well as the former Effect. Infallible Experience, and *Hippocrates*, are Evidence that Loosenesses are for the most part fatal in a Pleurisie ; in regard they suppress the Spitting, increase the Difficulty of Breathing, and, in a few days, either kill the Patient, or turn him into Chronical Diseases. Hence 'tis evident how far those are out, who, upon the Pretence of lessening the Cacochymy, or some such trifling Story, exhibit Purgatives in the Beginning of a Pleurisie, to the great Detriment of the Patient. For since *Peripneumonia's* and Pleurifies derive their Origin from the inflammatory Disposition

sition of the Blood, that shocks the tender Membranes of the Lungs, we must endeavour, by all means, to procure a gentle Dissolution of this Inflammation, by emptying the Vessels and exhibiting temperate *Alkali's*. If to the inflamed Blood you add the inflammatory Stings of Purgatives, especially while the Disease is yet crude, you'll not only excite such Motions of Nature as are downright contrary to your End, but, by exasperating the Inflammation, suppress the Spitting, and heighten the Difficulty of Breathing, till at last the Patient either dies or falls into a Consumption.

## II.

As Purgatives are very dangerous in Pleurisies and the Diseases of the Breast, so Diureticks are very useful. For in all Diseases of the Breast, we are taught by the infallible Direction both of Nature and Experience, always to direct our Course to the urinary Passages. Indeed, in the Diseases of the Head and Face, the same Direction teaches us to exhibit frequently gentle Purges, which are then very serviceable, especially if accompany'd with Baths for the Feet. To this Purpose, *Jacotius* says in his *Com. ad Coac. Hip. lib. 4. fol. 212. That the Belly is almost always costive in the Diseases of the Head*. In speaking thus of the Diseases of the Head, I do not mean those produc'd by the Acrimony, Convulsion, and too great Shock of the Solids or Fluids; but those proceeding chiefly from the Grossness, the Stagnation, and Ropyness of the Fluids. The chief Purge that gives Benefit in such Diseases, is the Powder of *Cornarhini*. The principal Diureticks for the Diseases of the Breast are all the Preparations of Turpentine, prepar'd *Anglice*, *Fernelius's* Syrup of Marsh-mallows, and the



the Herbs that are commonly call'd *Aperient*. Considering that Acids are unfriendly to the Breast, we ought in this Case to avoid Diureticks prepar'd of Acids; as *Hoffman* upon *Schroder* has well observ'd, *Fol.* 376. where he disproves the Use of the Balsam of Sulphur in a Phthifick and the other Disorders of the Breast, upon the Consideration that it abounds with an unctuous Acid, which rather increases than extirpates the Phthifick. Of which Truth, the experienc'd *Valschimid* is likewise a Witness. But to drop this Digression: The Application of Blistering-Plaisters in the Case of *Delirium's* in Men, is nocive rather than useful; and is oftner follow'd by Death, than by Recovery. But, on the other hand, delirious Women receive such Benefit from Blistering-Plaisters that they mitigate both the Symptoms and the Disease, and prove a main Instrument of Health. This I observ'd at *Rome*, in the Beginning of the Year 1694; in which Season *Italy* was cover'd, in an unusual Manner, with Ice and Snow, and a great many dy'd suddenly; not to mention that feverish Catarrhs were then very rise as well as moist Coughs, with a stuffing up of the Lungs, Cholick Pains, *Peripneumonia's*, and Pleurifies, which seiz'd the Men more than the Women. When a *Delirium* is imminent, instead of applying a Blistering-Plaster, I use to open the *Salvatella* in the right or left Hand; and sometimes I apply scarify'd Cupping-Glasses to the Shoulder-Blades, adjusting the Quantity of Blood drawn, to the Age, Temperament, &c. of the Patient. The Opening of this Vein oftentimes prevents an approaching *Delirium*, or checks it very much if it has taken place already; the Impulse of the inflam'd and sharp Blood upon the Head, being either diverted by the Revulsion, or lessened by the Evacuation of these Out-lets. After Bleeding I prescribe large Quantities of

Emulsions

Emulsions made with the Water of *Carduus Benedictus*, or Violet-Water, or Barly-Water: Sometimes I shift the Emulsions with diluting Decoctions of refrigerating Herbs, qualified with a convenient Quantity of Nitre. Of the nitrous Preparations, I recommend the Antimonial Nitre, or *Sal Prunell*. Sometimes the Ulcers rais'd by Blisters are in Disorder, thro' the Fault either of the morbidick Matter, or of an ill Habit of Body; in which Case they grow gradually dry, with a blackish or livid Colour, and threaten somewhat like a Gangrene. In such Cases, a present Remedy is Honey of Roses, anointed upon them twice or thrice a Day. Upon the Inunction of the Honey the Patient will perceive an uneasy pricking Pain, and a Sort of Effervescence, which proves a good Sign; for after a Day or two, a Moisture will appear upon the Ulcers, the Purgation of the Ulcers will be promoted, and the black Crust that formerly cover'd 'em will fall off, and soon after a reddish Flesh will grow upon 'em.

### III.

I have seen the good Effects of this Honey of Roses, not only in the Ulcers of Blisters, but in all other that tend to a corrupt and sordid state. In May, 1693. I tended at Rome a young Man that had an ulcerated venereal Bubo in his Groin, with an acute Fever, Thirst, Prostration of Strength, &c. The Ulcer was broad, painful, inflammatory, and cover'd with a black Crust. As soon as I was call'd I prescrib'd ten Ounces of clarified Goats Whey to be taken in the Morning; and at Night, an Emulsion of the Seeds of Melons and Gourds made with *Carduus Benedictus* Water, and mix'd with two Scruples of Crabs-Eyes. Instead of solid Eatables he eat, every six Hours, Broth impregnated with Al-  
calic



calic Herbs, and the Yolk of an Egg added now and then. The Ulcer I order'd to be anointed twice or thrice a Day with Honey of Roses. This Method continued for ten Days, discuss'd the Fever with its concomitant Symptoms, and the Honey cleans'd the Ulcer very well ; so that upon drinking a slight Decoction of *Sarsaparilla Guaiacum* Wood, crude Antimony, &c. he recover'd perfectly. Here I must remark by the Bye, that a diluting Diet goes a great way in the Cure of Ulcers ; particularly Decoctions of the alkaline, dulcifying, and balsamick Herbs, vulnerary Decoctions, and the like, prescrib'd in large Quantities. For by vertue of such copious diluting Prescriptions, the sharp Salt of the Ulcers reigning in the Mass of Blood, is dulcify'd and blunted ; and being thus diluted with a copious Fluid is readily expell'd by such Passages as Nature finds convenient, whether Stool, Urine, or Sweat ; upon which the Blood thus dulcify'd and purify'd, contributes highly to the Cicatrification of the Ulcer. Now these Effects are not to be expected from Bagnio's, a drying Diet, sudorifick Decoctions, and the like ; which by exalting and sharpening the pointed Salt of the Ulcers, reduce the Patient to a desperate State of Health, especially if his Body is not cachectick, moist, pale, and of a loose Consistency ; or if the Ulcers are not of that Nature. Indeed if they are, a customary Use of Drying Things may be of some Use. In the Diseases of the Eyes and Face, Blistering-Plaisters apply'd to the Neck are as good as Specificks, and preferable to any other Remedies ; particularly in a Suffusion, and what is commonly call'd Rheums or Defluxions upon the Eyes. This I have frequently beheld with Admiration. Sometimes the Ulcers of Blisters are hard to heal, even when the primary Disease is cur'd long before, and the Ulcers have made a  
sufficient

sufficient Evacuation of the morbidick Matter; nay, they continue open and running for many Months, in spite of all Remedies. In this Case, I have not met with a better Remedy than Frankincense powder'd very fine, and sprinkl'd upon the Ulcer twice a Day. I have likewise found the Cicatrization promoted by Lint or toaz'd Threads, boil'd in the Decoction of crude Allom, and then dry'd and laid upon the Ulcer. But sometimes, when the Body is very foul, I have found even these do but little Service.

## IV.

Blistering-Plaisters, *Sinapismus's* or inflaming Applications, Purgatives, and such like stimulating Things, are not to be us'd in juicy and plethorick Bodies, and such as are over-cram'd with Humours, unless the Vessels be first clear'd, either by Bleedings, if the Indications require it, or by a severe Diet: For while the Humours are crouded, or move rapidly in the Blood Vessels, the Secretion of the Fluids in the Sieves of the *Viscera* and other Parts, is perform'd either with Difficulty, or in a Morbidick Way: For, by the Rules of the Mechanicks, a due Secretion requires not only clear Pores and a proportion'd Resistance of the Solids, but likewise a proportional Motion and Quantity of the Fluid that is to be strain'd out; and if either of these Conditions be wanting, the Secretion will be carry'd on in a preternatural Way; as I intimated before, in recommending Emulsions and refrigerating Remedies against a sleepy Disorder in the Beginning and Increase of ardent Fevers. The *Stimuli*, or pungent Particles of Purgatives, Blistering-Medicines, and Diaphoreticks, raise in the Fluids a greater Fermentation, Turgescency, and Rapidity, and in the Solids a  
 fort



sort of lively Vibration ; so that if the Humours are too plentiful in the Vessels, or be rais'd by violent Fermentations to the highest Degree of Turgescency, by which Means they out-do the Resistance of the Solids, and variously pull, extend, and twist the Fibres of the *Viscera* : If this happens, I say, 'tis no Wonder if soon after we meet with Ruptures of the Vessels, and dangerous Fixations of the Fluids ; a thing that daily Experience makes out sufficiently. For after an indiscreet and unseasonable Use of Purgatives, Blistering-Plaisters, Diaphoreticks, &c. there's nothing more frequent than an Exasperation of the Fever, *Delirium's*, Inflammations of the *Viscera*, convulsive Motions, spontaneous Bleedings, and the like ; which, after all, would not happen, if such Remedies were not prescrib'd till after the clearing of the Blood-Vessels by the Means of Bleeding ; for after the Humours are disengag'd, and circulate in more Room, 'tis impossible then for any Fermentation or Turgescency, excited by such Medicines, to shock the solid Parts, or make way for the Coagulation and Stagnation of the Fluids. 'Twas for these Reasons, perhaps, that Dr. Sydenham, whom Italy admires so much, recommended so earnestly the ushering in all Purgatives, especially those of the stronger Form, by emptying the Vessels with Bleeding or Diet, if the Disease gives time. This Author has likewise established, upon repeated Observation, a Method of managing the febrile Fermentation of the Blood, as well as some other Authors of this Age. He was the first of the Northern Authors that reduc'd the slippery Method of the otherwise learned Northern Physicians, to the right Path of Reason and Experience ; and, among other Things, affirm'd, That such as exhibit Purgatives in the Beginning of acute Diseases, are equally guilty with those who give Diaphoreticks  
in

in the same Case ; upon the Consideration, that the febrile Fermentation of the peccant Matter being then crude, confus'd, and unqualify'd for Depuration, is yet more disturb'd and fretted by the additional *Stimuli* of Purgatives, Diaphoreticks, &c. and instead of a due Depuration, produces an Exacerbation or Reduplication of the Fever, Watchings, *Deliriums*, Inflammations of the *Viscera*, convulsive Motions, and a thousand such Things. But of this more at large in our foregoing Books of Practice.

## V.

From what I have premis'd, 'tis manifest that Blistering Remedies enjoy a notable Vertue of dissolving and attenuating gross, coagulated, and stagnating Blood ; and are Specificks in a manner in Suffusions, in Disorders of the Eyes arising from a Flux of Humours, in Fevers proceeding from Coagulation, and such other ropy Disorders of the Humours. Now considering that stubborn Obstructions of the *Viscera*, *Cachexies*, and Chronical Suppressions of the Terms, are owing to that sort of Blood, I would therefore exhort Physicians, in such desperate Cases, to try *Cantharides* either in Plaisters or any other more convenient Way, that the Cure of such difficult Diseases may be set in a more clear light. *Thomas Bartholinus*, Cent. 5. Obs. 28. shews the Way of making an Infusion of *Cantharides*, which he cries up as a Specifick for Curing a virulent Clap and suppression of Urine, and expelling the Stone. The Preparation is as follows : Infuse a Scruple of the Powder of *Cantharides* in three or four Ounces of *Rhenish Wine*, or *Spirit of Wine* : After they have been infus'd for some Days, filtrate the Liquor through brown Paper, so that none of the Substance of the *Cantharides* may go through ; mix a Spoonful



Spoonful of the strain'd Liquor with seven Spoonfuls of Wine or Ale, and take off this Mixture, one Spoonful the first Morning, two the next, and so on. Now, whether this Remedy is to be given in the Obstructions, and the Diseases mentioned but now, is what I have not yet put to the Trial. Those who are subject to a grievous Cough, with gross and copious Spittings, do not meet with so much Relief from any Remedy, as from a Blister applied to the Neck; and if the Ulcer of this Blister shou'd happen to heal suddenly, another may be apply'd behind the Ears, or upon the Shoulder-blades; for the serous Impurity ouzing from the Body of the Blood is diverted by the Blister from making that Impulse upon the Lungs that occasion'd the Cough. This I observed in the Hospital, upon the Prescription of an old Physician: And Dr. Willis experienc'd it in his own Case. Having thus dispatch'd a brief and faithful Account of the Use of Blistering Remedies, the next Chapter shall be employ'd in giving a mechanical Account of the Manner in which they operate.

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#### C H A P. IV.

*The Nature of Blistering Medicines is evidently demonstrated from the Mechanick Doctrine of the Stimuli.*

#### S E C T. I.

**B**listering Remedies operate by Stimulating, and make the principal and most considerable Figure among what we call *Stimuli*; For a clear Understanding of which, I shall here present you with

with some short Hints, in imitation of *Eellini* in his learned Treatise *de Stimulis*.

My first Position is this : A *Stimulus* ought to produce a greater Effort in the Motions of the Parts, of which the whole Membraneous System is compos'd, as also an Expression of any liquid Body, and its moving where it can.

I affirm, in the second Place, That upon the Operation of a *Stimulus*, the Hairs or Fibres of the Membranes, that is, of the whole Body, ought to be contracted with more Force than they naturally are ; and by this Means, the Expression of the Liquids will be compell'd more easily : For this greater Contraction will make the Hairs or the Threads shorter and harder, and withal stiffer and more bent, so that their Trembling or Vibration will be more lively, and the Excursion of the Fluids, being within the Contact of the said Fibre, will have a greater Force in the Diameter, and both the Efforts being increas'd, the Expression of the Liquor will be facilitated, as well as its Derivation to what Place it can best come at.

My third Assertion is this : A *Stimulus* ought to add more Strength to the Contraction of the Muscles, occasion'd by the Liquids or Juices that run within 'em ; by which not only the Expression of the Liquors will be facilitated, but the Swiftmess and Circulation of the Blood will be heighten'd. For since the Force of a *Stimulus* raises the nervous Liquid to more frequent Undulations, so by vertue of the Motion of Derivation, a more than natural Quantity of this Juice will be convey'd into the Nerves of all the Muscles ; by which Means the Muscles will suffer a stronger Contraction, and make strong Efforts outwards with their Hairs or Threads, and so squeeze out all the more Liquid Parts that lye within the reach of their Contact ; that is, that lye round them and within



the Space in which they are successively mov'd while they suffer Contraction.

My fourth Assertion is this : According to the Diversity of the Part in which the *Stimulus* operates, it may either be reddened without a Swelling, or really inflam'd, or neither swell'd nor reddened ; or it may swell with some other Tumour, and even evacuate a great deal of Matter that the *Stimulus* does not call to that Part.

I say, in the fifth Place ; That the same Things would happen, if to the *Stimulus* were joyn'd a certain Faculty of piercing inwards, and preparing the Humours ; but some Evils may likewise ensue thereupon, and those of a quite different Nature from the *Stimulus* alone.

For a sixth Position : If a *Stimulus* does not only bend but pull asunder, and be either simple or joyn'd with a Ferment, 'twill produce the same Effects as above.

The seventh Conclusion is as follows. Such is the Operation of an Evacuating and a simple or Unfermenting *Stimulus* ; whether the Evacuation be made from the very Part that's stimulated, or by the natural Emunctories, namely the Nose, Mouth, Fundament, &c. Such I say, is its Operation that it may Evacuate not only what it expresses from the circulating Humours, but likewise the Matter squeez'd out of the Substance of the Threads or Fibres of the solid Parts : And the same will be the Effect of the *Stimuli* accompanied with a Ferment, such as Blistering-Plaisters, *Sinapismus's*, &c. For these and indeed all stimulating Things provoke every Hair or Fibre of the solid Parts to a valid Contraction, and to an Expression of all that's in a fluid State. Now the Fluid thus express'd will move off where it finds a Passage. Whatever is squeez'd out of any Vessels will undergo a derivation out of them, and be convey'd  
between

between the Membranes, both upon their Surfaces, and in the Interstices of their Pores : But that which oozes from the Fibres of the solid Parts, may be conducted within the Vessels. Upon the whole we conclude that the Evacuating *Stimuli*, tho' unprovided with a Ferment, may draw out both the Liquid express'd from the Humours, and that squeez'd out of the Substance of the Fibres, either by the natural Eimunctories, or by such Events as are made in the Stimulated Parts.

Eighthly, The unevacuating *Stimuli* move with a great Force, and are able to make a mighty Dissolution. The Evacuating *Stimuli* not joyn'd by a Ferment are capable of the same Effect, and besides impair the quantity of the Liquids. Nay both the one and the other must needs dry very much. The evacuating *Stimuli* accompanied with a Ferment may produce the same Effect ; but according to the Diversity of the Ferment to which they are tack'd, they may either condensate, melt down, coagulate, fix, or in fine do whatever you have a mind to.

A *Stimulus* makes a very notable Contraction, and the Contraction makes a very great Expression of Fluids, even in the remotest Parts ; so that a *Stimulus* makes a very great Impression both upon the fluid and solid Parts. This argues the necessity of Stimulating Medicines in such Diseases as proceed from a Coagulation and Ropyness of the Humours, accompanied with a Paralytick Disposition or Laxity of the Fibres ; notwithstanding the false prepossession of the Vulgar to the contrary. Further : The Contraction of the Blood Vessels being thus increas'd, 'twill alter the Contact of the Ropy Liquid that stagnates within 'em ; and the Velocity of the whole Mass of Blood being likewise increas'd, the Mass will thereby have a greater Force to sweep it along the Canals, and



convey it to the *Viscera*, in which it may be further concocted and dispos'd to an Egress.

The Ninth Position. If the Parts of the Liquid that besinears the Membranes of our Body, did all Press one upon another, and make a mutual Pressure every way, as the Particles of the Blood do within the Vessels ; by vertue of this Pressure, the Matter even of the most distant Parts might be drawn by Derivation, and voided by the Emunctories of the *Stimuli*. But such a mutual Effort in these Liquids does not stand to Reason.

In like manner, if the Skin and all the Membranes of our Body were naturally so bent and distended, as to contract all round upon the stimulating or pulling of any one Part, and that in such a manner as to make the Effort tend to the Place of Divulsion, and drive all Liquids towards it, as the Bladder does in pressing forth the Urine : If this were the State of the Membranes, their Contraction might convey to the Emunctory of the *Stimulus*, and evacuate by that Passage the Matter even of the remotest Parts : But such a natural Tension in all the Membranes, such an Universal Contraction, and pointing of the Impulse towards the *Stimulus*, do not seem to be reasonable. But at the same time the Matter lodg'd in any Part may be mov'd by a distant *Stimulus*, if the *Stimulus* be plac'd upon a Nerve or any bent Membrane, that reaches to, and is woven in with that Part, and it may be Evacuated by the Emunctory of the *Stimulus*, if 'tis either within the Nerve, or can be convey'd thro' the Fibres of the Membrane ; or if it be so reduc'd to that State of Fluidity by the Influence of the *Stimulus*, as to flow to the Emunctories. Above all, the most certain way by which the *Stimuli* act upon the most distant Parts, is that of Jogging, Stimulating, and searching.

searching the whole Body, and lessening the whole Quantity. But you may read more of this Matter in *Bellini, de Foliculo Contractili*. Since therefore the *Stimulus*, by virtue of its Contraction, makes a Concussion not only of one particular Part, but of the whole Body, and squeezes it all over, upon which the express'd Liquid flows, where-ever it meets with a Passage, into the Blood-Vessels, and all round, and some of it is evacuated by the Emunctories : Now the Quantity of the whole being thus impair'd by this Evacuation, questionless the affected Part, tho' lying at a Distance, will be visited by a lesser Crowd ; so that in such Diseases as are said to proceed from De-fluxions, namely some Catarrhs, suffocating Coughs, and those occasion'd by ropy tough Matter, the Diseases of the Eyes, particularly Suffusions, some periodical Pains, &c. in all Diseases retaining to the Stagnation and stubborn Fixation of the Humours, such as Apoplexies, Palsies, sleepy Disorders, Obstructions, &c. In these, I say, and the like Distempers, the main Stress of the Cure will, for the Reasons above-mention'd, lye upon the stimulating Effects of Blistering-Plaisters, or some such stimulating Med'cine ; and it must needs be a very criminal Thing to omit Blistering-Plaisters in such Cases, in Compliance with Speculation or receiv'd Hypotheses.

My Tenth Assertion runs thus. When we apprehend any danger of an overbearing Afflux of Humours to a stimulated Part, our safest way is to apply the *Stimulus* at a distance from the Part that we mean to evacuate. But if no such Danger be fear'd, we may apply it just by the Part. Many *Stimuli* are better than a few, when 'tis proper to excite lively Motions and brisk Vibrations or *Oscillations* in the Fibres ; and in this Case, the *Stimuli*



ought not to be confin'd to a narrow Space. When the Pain and Sense of the Stimulation ceases, we must either repeat the Application, or rub up the Wounds it gave. If we desire a sudden and evident Benefit from stimulating Med'cines, we must make 'em numerous, large, and sharp; and whatever heating or drying Inconveniencies may thereupon ensue in the Body, must be mitigated with moistening and cooling Things, taken in large Quantities, which will likewise serve to appease the provok'd Spirits. Accordingly we find it attested by several Histories, that dismal sleepy Disorders, Apoplexies, and the like, have been took off almost in a Minute of Time, by applying a large Blistering-Plaister all over the Head, the Hair being first shav'd off. But when the Stimulation is to be continued for a long Time, we make 'em lesser and fewer, for the Reasons above-mention'd. From all which, we make this Inference, That stimulating Med'cines make a great Agitation and Consumption of the Spirits; as 'twill appear more plainly from what follows.

The Eleventh and last Position is this: Tho' stimulating Med'cines may supply the Room of Bleeding, and operate as expeditiously, especially if they are very sharp, yet they are not so safe as Bleeding. But at the same Time, I must own, they have something peculiar in 'em that is not obtain'd by Bleeding; for they move, contract, and shake the whole Body, and at once excite and jostle both the fluid and the solid Parts.

From all these Propositions, we might deduce an Infinity of practical Corollaries, to set the Benefit and Injuries of stimulating Med'cines in a clear Light; But considering that the learned *Belini* has pursu'd that Subject with so much Solidity, and given an evident Reason for every Proposition,

sition, I shall content my self with a few Hints relating to the Cure of Diseases.

## II.

Some *Stimuli* are single, or simple, and some are accompany'd with a Ferment. The former are such as impart none of their Substance to the Humours within, when they tear, redden, and pain the Part ; such are searing with a hot Iron, Frictions, Cupping-Glasses, whether simple or scarri-fy'd, and the like. Those accompany'd with a Ferment, are such as communicate something to the Humours ; as Blistering-Plaisters, *Sinapismus's*, *Dropax's*, and the like ; the sharp Particles of which do at once twitch the Part, and join the Blood, and forcibly dissolve, open, and jumble its Mass. Both these *Stimuli* make a violent Agitation of the Solids, as well as the Liquids ; (only the fermenting Sort make the greatest ; ) and the Solids thus toss'd, make a more forcible Impression upon the Liquids, which being thus press'd, come with a greater Shock upon the Solids ; and so there ensues a mutual Pressure and Rebound, which makes several Parts of the Liquids, between two neighbouring Parts, or upon the outer Surface of two that are not contiguous, to bend their Impulse inwards ; by which means, the Coherence and Mixture of their Parts, is either sunk or establish'd. The same must be the Influence of Solids upon their own Parts, of Liquids upon Solids, and of Solids upon Liquids ; that being the Consequence of their mutual Action and Reaction. 'Tis therefore a standing Truth, as I have oftentimes insinuated, that the solid Parts are much shak'd and dissolv'd by the *Stimulus* ; and that the same *Stimulus* affects the Liquids with an Agitation, Dissolution,



lution, Mutation of Contact, and a violent Expression and Derivation, where-ever a Passage is found. In regard these Actions consume a great deal of Moisture, and weaken the Spirits, we ought to prevent such Inconveniences by moistening and corroborating Prescriptions ; for, otherwise, the stimulating Med'cines will fall short of their desired Effect.

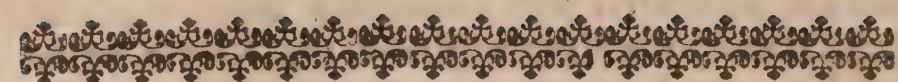
The Mechanicks are Evidence, that Blistering-Plaisters are the principal *Stimuli*, and have a just Claim to all the Effects now mention'd ; And therefore 'tis credible, that some Diseases can scarce be cur'd without Blisters, and that others will be exasperated by the unseasonable Use of the same. They are not prescrib'd so much for lessening the Quantity of the Humours, and drawing out the Malignity, (as some fancy) as for dissolving and moving the coagulated, gross, and stagnating Humours, and drawing them from the Part affected to the Emunctory of the *Stimulus*. For what they evacuate is inconsiderable, and insufficient to lessen the Quantity of the peccant Matter. Perhaps somebody may start the Question, Whence the Humours come, that are thus evacuated by a Blistering-Plaister ? I answer, they are thrown out partly from the Pores and Glands of the Skin, and partly from the Ends of the Arteries and the Extremities of the nervous Fibres ; and, after the Action and Vibration of the *Stimulus*, from the whole Body and all the remotest Parts, as I shew'd above : For the *Serum*, impregnated with the stimulating Particles of the Medicine, is separated very quickly, and pull'd asunder (as 'twere) in great Plenty from the rest of the Mass of Blood ; and at every Turn of the Circulation, a great Quantity of it is thrown out by the continually irritated Ends of the Arteries ;

upon

upon which Occasion, the other morbifick Particles are separated and evacuated along with it. And farther, the Extremities of the Nerves being laid bare, and irritated by the Application of a Blistering-Plaister, 'tis probable somewhat is likewise thrown from the Nerves upon the stimulated Part ; for the whole nervous Liquor being put into a Commotion by the *Stimulus*, is cur'd of Stagnation ; and at the same Time, the heterogeneous Particles mix'd with it being toss'd on all Hands, and drawn by Derivation from the Brain, slide gradually towards the new-open'd Emunctory, and so are thrown out.

From what has been said, we conclude, That the principal Diseases in which Blistering-Plaisters are more proper than in other Distempers, are, malignant Fevers arising from the Coagulation and Viscidity of the Humours, sleepy Disorders, Catarrhs retaining to a viscid Matter, and threatening an Irruption upon the Lungs, or any other noble Part, or upon the Nostrils, Eyes, Throat, Breast, &c. ; fix'd and tearing Pains in any Part ; some cutaneous Diseases and erratick Pains, Convulsions without Fevers, Epilepsies, and such other Disorders of the Nerves ; and, in a word, all Cases in which 'tis proper to dissolve, twitch, move off by Derivation, excite, or the like, with due Regard to the Genius of the Disease, and the Dictates of Experience.





# DISSERTATION III.

Containing Several

## *Anatomical and Practical* OBSERVATIONS.

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### *The P R E F A C E to the Reader.*

**O**F all the Enquiries and laborious Adventures of Anatomists, I reckon none more useful for the Illustrating of the *Ætiology* of Diseases, and the Structure of an animated Body, than the Infusion of Liquors into the Veins or Viscera of live Animals; the Death of which does so alter the System both of the solid and the fluid Parts, that sometimes they appear quite different from what they were before, and sometimes are hid from our View: Whereas the Experiments we make upon living Animals by way of Infusion, afford a clear and unfeigned Representation of the Effects that proceed from thence. To speak ingenuously, all the Discoveries made by Anatomists in these Days, either in Italy, or the more Northern Countries, are owing to the Dissection of live Animals. Upon this Consideration, I stand amaz'd that this Age applies themselves  
so

## The Preface to the READER. 411

So little to the *Art of Infusion*, by which they might bring to light so many unknown Things, relating both to the Nature of Diseases, and to the Constitution of an animate Body. Many learned Anatomists have pursued it with Prudence and Discretion, and have describ'd the Syringe, and other Instruments employ'd in the Performance; but even these stuck at the Threshold, and went no further. Having these Things fix'd in my View, I chose to enlarge this Book to a just Bulk, by subjoining these Four Experiments, that lay scatter'd and rough-drawn in my private Notes; and at the same Time, to gratify the Anatomists, I have added the History of the Dissection of Malpighi's Corps, which I perform'd at Rome last Year; and in regard I tend-  
ed him in his Illness, I have likewise put in a short History of his Distemper. I have likewise added some Remarks of an Apoplexy that was almost Epidemical, for the last Two Years, not only in Rome, but all over Italy; designing some Time hereafter to make a particular Dissertation of that Sickness, and of the Dissections of the Corps of such as dy'd of it. This is what I thought proper to premise.

Rome, Nov. 29.

1695.

A Col-



*A Collection of EXPERIMENTS, made  
by the Art of Infusion upon Living  
Animals.*

EXPERIMENT I.

**A**Bout Ten Years ago, I took a great Dog at Naples, in the Month of July, and opening his jugular Vein in the Afternoon, I injected into it with a Syringe Half an Ounce of the Spirit of Vitriol. As soon as I had clos'd and swath'd up the Wound, the Dog was seiz'd with a Shivering and Shaking, he vomited and threw out great Plenty of Spittle, he fell down upon the Ground, was breathless, and somewhat touch'd with Convulsions ; after a few Hours he dy'd. When I cut up his Carcase, I found all his *Viscera* of a blackish Colour, and a great Quantity of black and clotted Blood in the Heart ; the Blood in the Lungs was likewise clotted, but every Thing besides was found.

A COROLLARY.

I meet with few Authors of this Age, that treat of the Art of Infusing of Liquors into the Blood or Vessels of a living Animal, or lay down the Method of going regularly about that Art, notwithstanding that the Nature and Cure of Diseases might be mightily illustrated by it. If we take a narrow View of all the Accidents that happen to an Animal after this Infusion of Liquor, relating to any Functions of Life, or any of the Bowels  
or

or Parts of the Body ; by a just Parallel we may apprehend, that *that* Infusion prescrib'd to Patients, might produce the like Symptoms in human Body. 'Twould be a great Improvement of the Practice, if any Society or Body of Learned Men would pursue these Experiments of Infusion, by proceeding gradually to various Liquors, and establishing a Method in making their Experiments, and then digesting them into one Body ; as the famous *Mangetus* has done in Anatomical Matters, in that golden Book of his, entituled, *Bibliotheca Anatomica*. My Learned Friend, *Lanzonus*, Professor at *Ferrara*, is Evidence, that the same Method is necessary in practical Things.

## EXPERIMENT II.

*Rome, Jan. 30. 1693.* I view'd the right crural Vein of a young Dog, near the Groin, and infus'd with a Syringe two Ounces of rectify'd Spirit of Wine. After the Injection, the Dog shiver'd and shook all over for Half a Quarter of an Hour, then he voided Urine in great Plenty, and was well as to all the Functions of Life. I cut him up afterwards, and found all the fluid and solid Parts in a natural State.

## EXPERIMENT III.

Having ty'd a young Dog down upon a Table, I open'd his right Jugular, and infus'd two Ounces of the rectify'd Spirit of Wine ; but the Injection was scarce over, when the Dog expir'd. In cutting up his Carcase, I found the Blood very much clotted and coagulated in the Lungs ; but all the other Parts were sound.



## A COROLLARY.

The two last Experiments teach us, what different Effects the same Medicines may have upon the Humours according as they are apply'd to this or that Part, internally or externally, &c. For considering that the Blood returning from the whole Body, rushes continually and in great Plenty into the Lungs; 'tis no wonder, That the Spirit of Wine thrown immediately by the Jugular Vein into that great Ocean of Blood, coagulated it immediately, and occasion'd sudden Death; for Spirit of Wine thickens the White of an Egg very remarkably; and being held in the Mouth makes the Spittle as thick as Glew. *Etmullerus Tom. 1. de Nutr. & Aust.* and *Bohnius cap. de Somn. & Vigil.* affirm, That Spirit of Wine produces the same Effects in the Blood and Spirits. Now the same Effect could not ensue upon the Injecting of Spirit of Wine into the Crural Vein, for there being but a small Inundation in that Part, which moves with a continued Velocity to the Heart, without any such stay as is observ'd in the Lungs; the coagulating Vertue of the Spirit is easily enervated and broken, before it arrives at a larger Channel, where by vertue of the great Quantity, and the slow Progression, it might otherwise produce a Coagulation and fixation; and so its Vertue is quite sunk upon repeated Circulation.

This may furnish us with a Reason, why several Diseases after causing various Inconveniencies in divers Parts of the Body, terminate at last in Disorders of the Lungs and Kidneys: The Reason is this; the Blood thus tainted with Morbifick Particles, and being oblig'd in course to visit these two *Viscera* more frequently and copiously than any other, can't but finish its fatal Tragedy, there occasioning

occasioning Ulcers, Coagulations or Gangrenes, or affecting them many other Ways. For this Reason we ought always to take care of the Lungs and the Kidneys in the Diseases of long standing.

## E X P E R I M E N T IV.

In the beginning of 1691. I laid open at *Padua* the Jugular Vein of a young Dog, and injected with a Syringe four Ounces of cold Water. After the Wound was done up, the Dog was seiz'd with an universal Shivering and Shaking, but he liv'd and did well.

## E X P E R I M E N T V.

*Padua*, 1691, being assisted by the worthy Mr. *Fardella*, Professor at *Padua*, I took a large Dog, on *Thursday*, at four a Clock in the Afternoon, and making an Incision under the right *Hypochondrium*, put a strong Ligature upon the descending Trunk of the *Arteria Magna*, and the *Vena Cava*, and by chance we likewise tied the right Ureter. After the Wound was sew'd and bound up, the Dog vomited thrice, and then he fell down for dead; in which Condition he lay without the Accession of any other Symptom till next *Friday*, on which he dy'd about six a Clock in the Morning.

Upon opening his *Abdomen* we found a sort of Swathe or Streak of a yellowish green Colour, and two Fingers in Breadth, ran length-ways all along the Intestines. His *Diaphragm* was somewhat inflam'd. The Bile was all thrown out of the *Gall-Bladder*. Having laid open the right Kidney, we found a prodigious quantity of *Serum* floating all over the Substance of the Kidney. The Blood in  
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the Heart was extream black. All other Things were in a natural State.

## EXPERIMENT VI.

Rome, Jan. 20. 1693. in an Hospital at Rome, I cut up the Corps of a Woman of 50 Years of Age, that dy'd of an Inflammation of the Colon; and found a Branch of an Artery running from the Trunk of the descending *Arteria magna*, that was inserted into the right Ureter about the Middle. But I was so hurry'd by the Servants of the Hospital, that I could not make any Observation whether this Artery was hollow, or rather harden'd into a Ligament, as the other frustraneous Parts are wont to be. Neither could I inform my self, whether this Woman had ever been troubled with a pissing of Blood, and the other Diseases of the Kidneys.

## EXPERIMENT VII.

At Bologna, I laid open the Throat of a little Dog (one of those call'd *Corsetto di Bologna*) and tracing the Carotid Arteries, separated from them the Nerves of the *Par magum* that descend on each side of the Neck, and cut these quite thro' the Middle. The Amputation was no sooner perform'd, than the Extremities of the Nerves were contracted towards the inner Parts of the Muscles. However, we sew'd and ty'd up the Wound. Presently the Dog became mute, and was ever afterwards incapable either to bark or howl; but he was brisk and walk'd well, only he was seiz'd by intervals with a Difficulty of breathing. From thence to the Third and Fourth Day, he vomited up whatever he eat, and grew very lean : From  
the

the 4th to the 9th Day, he eat little or nothing; and look'd like a Skeleton. The 9th Day in the Morning, he howl'd and bark'd prodigiously, though he had been so long mute before. At last, being wasted by not eating, he died on the 12th Day.

Having cut up the Carcase, I found all the *Viscera* clear and sound: Only the *Oesophagus* or Gullet was stuff'd for its whole Length, with the Meat he had formerly eat, and so was very much swell'd, for the Meat had no passage into the Ventricle. *Willis* made the same Experiment upon a Dog, as he tells us, *Tom. I. Cap. 24. De Nerv. Hist. & Usu.* But he did not cut, but only ty'd the Nerves with a Thread, and so 'tis no wonder the Symptoms to be observ'd, are different from those now mention'd.

## A COROLLARY.

All the World knows, that the Nerves which visit the Heart, are deriv'd from the Trunk of the *Par vagum*; and considering that in the foregoing Experiment, I cut quite through both the Trunks of the *Par vagum*, I wonder how this Animal could live, and the Heart retain its Pullation for Ten Days, after the Intercourse of Spirits to the Heart was cut off. *Willis* asserts, that besides the branches of the *Par vagum*, some Twigs of the Intercostal Nerves visit the Heart, and supply their Room. But upon a narrow Scrutiny, in several Dogs, I could never descry 'em: and so I leave the Matter to better Heads.

## EXPERIMENT VIII.

I joyn'd at Bologna with my learned Friend  
E e Guli-



*Gulielmini*, Professor in that Place, in separating nicely the Nerves of the *Par vagum* from the Carotid Arteries of another Dog, and tying them strongly with a doubled Thread. Some Authors tell you, that upon making this Experiment, the Dogs are presently seiz'd with an Apoplexy, but we observ'd no such Thing. Soon after the Wound was sew'd up, the Dog grew stupid, and could not stand upon his Legs, but reel'd from Side to Side. However he continued pretty well to the Fifth Day, only he eat or drank little or nothing. On the Seventh Day he died.

In dissecting the Carcase we found no extravasation of Serum, no swell'd Vessels, nor any marks of inflammation of the Brain. About the natural and vital *Viscera*, we met with great Fixations and Coagulations of the Blood. Every Thing else was in a natural State; which makes me apprehensive, that when Authors make this Experiment, they tie up along with the Nerves, the adjoining Carotid Arteries, and that makes the Dogs Apoplectic.

### EXPERIMENT IX.

At *Rome* I cut a Spleen out of a Young Dog, and heal'd the Wound very carefully. The Dog did well, he eat and urin'd well, and seem'd to be in a perfect state of Health, to the Fortieth Day, in which we kill'd him, and in cutting up his Carcase, could discover nothing new.

### EXPERIMENT X.

A large hunting Dog, Five Years Old, being accusom'd to swim frequently in Lakes and Rivers in quest of Fowl, fell into a desperate  
 2 Cough,

Cough, and a *Coryza*, which caus'd a grievous Suffocation. He broke out twice a Year, that is, in *April* and *November*, in a filthy Scab or Mange. After he had continued thus ill for Three Years, and was wasted to a Skeleton, we design'd him for an Anatomical Subject, and for that end fed him heartily before we Dissected him. About Five Hours after he had eat, we cut up the Abdomen and the Breast, the Dog being still alive, and found all the *Viscera* in these very well condition'd, and particularly the Lungs, where we thought to have met with the Cause of his Cough, *Coryza*, Leanness and other Symptoms; but we could meet with no Morbifick Thing, not in the Glandules of the Mesentery, which we view'd very carefully. At the same Time we observ'd the lacteal Veins very numerous in the Mesentery near the small Intestines; and near the lacteal Veins there run lymphatick Vessels, one of which I cut, and tasting the Lymph found it to be very sharp, and extream biting upon the Tongue. I have tasted such a saltish sort of Lymph, not only in this, but in other *Animals*. The Lacteal Veins, especially those of the larger Size, were knotted, and represented Branches of Knot-Grass; the Knots I speak of were their Valves, and were frequent after the same manner as those of the Lymphatick Vessels. I view'd likewise *Pecquetus's Receptaculum*, the Thoracick Duct, &c. 'Tis observable, that when the Steams which exhal'd from the *Viscera* of the Dog, when just Dissected, reach'd the Flame of the Candle that we made use of in the Operation, the Flame crackled, as if the Powder of Bay-salt had been thrown upon it. In fine, there being no observable defect in the *Viscera* and Lungs, I



was of the Opinion that the *Coryza*, Cough, danger of Suffocation, &c. were owing either to a carious Ulcer of the inner Parts of the Nose near the Sieve-like Bone, or to the great Acrimony and Saltness of the Humours that continually irritated and gall'd the above-mention'd Parts.

## EXPERIMENT XI.

### *Of the Circulation of the Blood in a Frog.*

Open with a pair of Pincers, first the Belly of the Frog, and then the Breast; you'll presently see the Mesentery and Intestines start out in the Belly, and the turgid reddish Lungs in the *Thorax*. In the Coats of the Mesentery, you'll observe some reddish Vessels scatter'd up and down, and these are the Veins and Arteries that nourish it. The Veins of Frogs are larger and thicker than the Arteries; but the latter beat, which the former do not. Both the one and the other are pellucid and transparent; and by the help of a Microscope you may gratify your Eyes with the pleasant View of the Motion and Ebullition of the Blood within their Cavity, of the position of the constituent parts of the Blood, and a great many very curious Things. What Discoveries I've made of this Nature shall be now related.

Having cut up the Belly in the middle, take the Intestines along with the Mesentery while they are yet sticking to the Frog, and minding one of the red Vessels that runs along the Mesentery, put aside the Intestines gently with your Fingers, that the reddish Vein may appear the better. When the Vein is fully discover'd, hold  
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it against the light of the Sun, along with the Frog, and with a Microscope of one Glass in your Hand, view the Effects of the Blood contain'd in the Vessel.

By this Method I observ'd the following Particulars. The Blood makes a Progressive Motion in the Vessels with great Velocity; and moves as 'twere in so many straight Lines, like a lay of the finest and most swift Threads of Silk. These right Lines run with greater celerity in the middle of the Vessel than near the Sides; and the nearer they are to the Sides, the more their Velocity is impair'd. When the Frog is near to Death, these right Lines of Blood move with a slower Current, and instead of a Progressive Motion, fly out side-ways, and seem to jostle and confound one another. To make the Frog live longer, and so prolong the Observation, you may only open the Belly, without touching the Breast.

In the Veins about the Mesentery I observ'd a retrograde Course in the Blood; for the Blood that ought to have mov'd through any Vein upwards, steer'd its Course downwards, and fell into the next Trunk, which seems to run counter to the Rules of Circulation and of the venous Valves. To come at Certainty in this Matter, I slightly anointed the Surface of one of these Veins of the Mesentery with Oil of Vitriol; upon which the Flux of the Blood through that Vein was presently stopp'd, for it retir'd to the next Veins, and so to a greater Trunk, as if there had been no Valves to oppose a retrograde Motion.

When the Frog is at the point of Death, the Circulation of the Blood in the Vessels is retard-ed; but if it be seiz'd with Convulsions, or mov'd by pinching, presently the Circular Mo-



tion is recall'd, and the Blood beginning to flow again from the Parts to the Center, continues so to do, while the Convulsions or Motions of the Frog are continued; otherwise it ceases. When the Frog is just a dying, the Arteries begin to empty, and the Veins to swell. As soon as 'tis dead, the Arteries are quite empty, and the Veins swollen. The small quantity of Blood that remains in the Arteries seem'd to be compounded or consist of so many fattish Globules, or very little Balls adhering to the Sides of the Artery. And these Globules of Fat appear more plentifully, if you take a Frog and kill it as soon as 'tis catch'd; for then 'tis well fed and the Vessels are more turgid. But if you keep it for some Days without feeding it, you'll perceive but a very small quantity of 'em, when the Arteries are empty'd by Death.

If you take out the Heart of a Frog and lay it upon a Table, 'twill beat with a regular Systole and Diastrale for half an Hour after, and sometimes for a whole Hour, especially if it be expos'd to the Heat of the Sun. Nay, if you cut the Heart in Pieces, these very Pieces will shew you the regular Succession of Systole's and Diastrale's. If these reciprocal Motions grow weak and low, you may revive 'em presently with the prick of a Needle, or by breathing upon 'em, or else by exposing 'em to a hot Sun.

Though the Heart, and all the natural and vital *Viscera* are taken out, the Frog will still jump, and move its eyes, and shrink when 'tis prick'd; and that for an Hour after. Nay, I have seen it do all this, and even swim in Water for several Hours after the Heart was taken out.

The Motion of the Blood, whether Intestine or Circular, is not perceiv'd any where so distinctly, as in a Frog, not only by reason that the Blood-Vessels of this Amphibious Animal are Transparent; but likewise, because it lives longer under the Anatomical Knife, and is easier handled, and its *Viscera* and Vessels are more conveniently put under a Microscope, by which means the Observation is prolong'd, and more time is allow'd for tracing the Truth; the Blood is observ'd to move further and further at every Pulsation of the Heart, and like one Wave pressing another, to be drove from the lesser to the greater Vessel, and from thence to the *Vena Cava*, and so to the Lungs. But we are not so happy in viewing the Circulation of the Blood in the Vessels, that lead to the Head and Eyes above the Heart, as in the Vessels of the natural *Viscera*; for we do not descry so many Ramifications of the Vessels in the former, as we do in the latter; or if there are any, they are tore in Dissecting the Breast, or at least if they are not rent, they run such a winding Course thro' the Bony Parts of the Breast, Neck and Head of the Frog, that 'tis a hard Matter to set them before a Microscope. In order to an easy and convenient view of the course of the Blood in the Vessels of the natural and vital *Viscera*, take care you do not tear the Belly too much with your Pincers, for if you do, you'll cut several Blood Vessels, and so the Circulation will be observ'd, either with difficulty, or for a very short time. In making these Experiments, you must make use of a Microscope of one Glass, holding it in your Right Hand, and taking a



nice hold of the Frog with the Fingers of the Left Hand, so as to hold it against the Light. 'Tis observable, That a Frog lives without any Inconveniency in Mr. Boyle's Air-Pump, notwithstanding the Air is all pump'd out ; but if you rub liquid Pitch upon the Back or Head of a Frog, it dies presently, as *Bartholinus* experienc'd several times, in *Tract. de Palmon.*

In a Frog, Tortoise, and other Amphibious Animals, we find but one Ventricle in the Heart, to which the Blood is convey'd by a Vein, and carry'd out by an Artery. In the egress of this Artery from the Heart we meet with a Valve of the same Form with the *Epiglottis*, which favours the Egress, and opposes the Retreat of the Blood.

Tho' a Frog will live and move for several Hours after the Heart is taken out, as I intimated above ; yet it dies presently, and all Motion ceases upon the removal of the Brain and Head. Now the contrary is seen in the hotter Animals ; a Pullet for Instance, the Heart of which beats for several Hours after the Head is taken off.

To the Kidneys of a Frog, on each side, there adheres a great many oblong Bags, fill'd with an Oily Substance, which stick close to the Trunk of the *Vena Porta*, near the Liver, and serve only as the Fat of the Kidneys, and to supply the room of the Caul.

*The History of the Sickness of Marcellus Malpighi, the Pope's Physician ; with an Account of the Dissection of his Corps.*

**H**AVING been intimately acquainted with Dr. *Malpighi* at *Bologna*, and waited upon him in his last Illness at *Rome*, I shall here oblige the learned World with a History of the Disease, and an Account of the Dissection of the Corps of that excellent Anatomist.

*Marcellus Malpighi* was of a Constitution that tended to a Dryness, an indifferent Habit of Body, and a middling Stature : He had been subject for many Years to Vomitings, bilious Stools, Palpitations of the Heart, Stones in the Kidneys and Bladder, a pissing of Blood, and some light Touches of the Gout. Upon his coming to *Rome*, all these Disorders were inflam'd ; especially the Palpitation of the Heart, the Stone in the Kidneys, and the very sharp biting Night Sweats. Such was the Condition of *Malpighi*, July 25. 1694 ; at which Time he was seiz'd in the Sixty-sixth Year of his Age, about One a Clock in the Afternoon, with an Apoplexy, usher'd in with Care, Passions of the Mind, &c. The Apoplexy was attended with a Palsy of the whole right Side, and a Distortion of the Mouth and right Eye. Presently we try'd several Remedies, particularly



particularly Bleeding in the left Arm : If it had not been for the contrary Sentiments of the Physicians that consulted with me, I would have order'd the Blood to be drawn from the Paralytick Arm ; upon the Consideration, That the defective Circulation of the Fluids in the Part affected, is not retriev'd by any speedier Method than that of opening a Vein in the same ; as it appears plainly from the mechanical Principles of Resistance and Motion. We prescrib'd at the same time scarrify'd Cupping-Glasses, to be applied to the Shoulder-Blades ; the Powder of *Cornachini*, *Sinapismus's* to be apply'd to the Soles of the Feet ; and several other Spiritous, Cephalick, and Specifick Remedies ; by the Use of which, after struggling 40 Days with a long Train of grievous Symptoms, particularly a Light-Headedness, a *Capiplenium*, and other Accidents, he got clear of the Apoplexy, and Palsy, and the above-mention'd Symptoms. But as Evils use to spread and gain Ground, so this famous Man suffer'd much by the foregoing Disease in his Memory and Reason, and melted into Tears upon the slightest Occasion. He was troubled by Intervals with Inappetency, a Want of Digestion in the Ventricle, a subsultory Motion of the Muscles, and slight Fits of a Giddiness. In fine, being worn out with these and other Symptoms, he was seiz'd, Nov. 29. with a fresh Fit of an Apoplexy, after the Injection of a customary Clyster in the Morning : This new Fit was usher'd in by a grievous *Vertigo*, with a Fit of the Stone in the Bladder for Eight Days, and an Exasperation of the above-mention'd Symptoms. But the Apoplectick

plectick Fit was more dismal than all the other Symptoms, for in spite of all Remedies whatsoever, he dy'd Four Hours after the Invasion.

### *The Dissection of the Corps.*

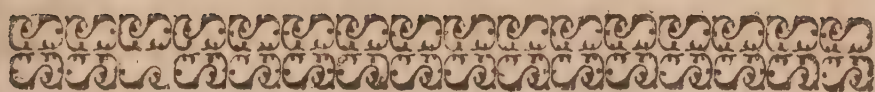
In Dissecting the Corps, I found the right Part of the Lungs somewhat flaggy and livid; especially the hinder Part, that adheres to the Back. The Heart was larger than ordinary, especially the Walls of the Left Ventricle, which were as thick as the Breadth of Two Fingers. The Gall in the Gall-Bladder was very black: The Left Kidney was in a natural State; but the Right was half as big again as the Left, and the Basen of it was so much dilated, that one might easily thrust Two Fingers into it. Perhaps this Dilatation of the *Pelvis* was the Occasion, that as soon as the Stones were bred in the Kidneys, they presently slid into the Bladder, and so sprung out from thence; which our Excellent Friend had frequently own'd to me to be a Matter of Fact. In the Bladder, we found a little Stone, that had descended thither Four Days before the Invasion of the last Apoplectick Fit, and by its Descent exasperated his last Vertigo's. The rest of the natural *Viscera* were very well condition'd.

When I open'd his Head, I found, in the Cavity of the Right Ventricle of the Brain, an Extravasation of about Two Pints of black clotted Blood, which was the Cause of his Apoplexy and his Death. In the Left Ventricle, we found about an Ounce and half of yellowish Water,  
with



with a small Quantity of little Grains of Sand mix'd with it. The Blood-Vessels of the Brain were dilated, and broke on all Hands. The whole Compass of the *Dura Mater* adher'd tenaciously and preternaturally to the *Cranium*. And this is the Sum of what I observ'd in dissecting his Corps, Dec. 7. 1694.





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## A P P E N D I X,

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*The APOPLEXIES that were almost  
Epidemical, in the Years 1694 and  
1695, at Rome, and all over Italy.*

FOR these Two last Years, (I mean 1694, and 1695,) the Apoplexy has swept off great Numbers of People, both in this City, and all over *Italy*; and the fatal Effects of this Disease were so frequent, that they alarm'd even the Healthful with Apprehensions of sudden Death. The Cause of this Epidemick Apoplexy is justly imputed to the unusual Constitution of the Weather in those Years. The Summer of 1693 was so extream hot and scorching, which was follow'd by nipping cold Weather, in the Beginning of 1694, and contrary to the Custom of *Italy*, with a rigid Frost, Snow and Ice. *Campania di Roma* and *Puglia*, which are seldom subject to Snow, were then cover'd with it to the Heighth of a Cubit. The Summer after that was much hotter than the former, insomuch that  
for



for Five Months together there was no Rain. About the Beginning of *October*, it began to be wet Weather, and continued such with a *Southerly* Wind to *April* 1695, and that to such a Degree, that so much Rain was not seen to fall at one Time within the Memory of Man. After Fifteen Days of continued Rain, perhaps we had Two Days clear Weather, which were follow'd by heavier Rains than what went before. After this uncustomary Weather, the above-mention'd Apoplexies display'd their Rage, and perhaps some Part of the Epidemick Illness was owing to the Universal Grief, and Domestick Care, occasion'd by such calamitous Times; all *Europe* being at the same Time engaged in a sharp War, the like of which has scarce been heard of since the Foundations of the Universe were laid. So many Cities were raz'd and burnt, so many Thousands of Men slain, all Commerce disturb'd, and the Avenues of Peace block'd up, that the strongest Heart could scarce bear the Thoughts of it.

Further: These Epidemical Apoplexies might be in some measure promoted by the malignant Steams rais'd by so many Earthquakes as *Italy* has felt from the Year 1687 to this very Day. And *Seneca* is of the same Mind, that Apoplexies may proceed from such subterraneous Vapours. See his *Nat. Quæst.* Cap. 27. *Naples* sustain'd the first Shock in 1687, but without any considerable Damage. It felt another Shock in *June* 1688, which not only shatter'd many Houses in the City, but levell'd with the Ground many adjacent Towns. At the same Time, *Benevento* was almost bury'd in Rubbish. The ensuing Years, several Towns of *Italy* trembled with Earthquakes, particularly *Armino* and *Ancona*, Two Towns upon the Coast  
of

of the *Adriatick* Sea, in the Territories of the Pope, which sustain'd considerable Damage the last Year : *Calabria* and *Sicily* were visited, and the fine City of *Calania* was bury'd in Ruins, so that at this Day there is nothing of it to be seen. *Messina* had several Houses shatter'd ; and a great many Towns in *Sicily* were quite overturn'd. This Year the Earthquake was felt at *Venice*, and *Padua*, and the adjacent Towns. The very last *June*, of the Year I now write in, viz. 1695, *Bagnorea*, a City of *St. Peter's* Patrimony, standing at the Distance of Fifty Miles from *Rome*, was quite laid all together in Ruins by an Earthquake ; and some Shocks were felt in the neighbouring Towns, especially *Viterbo* : The Earth open'd in several Places, and the best Part of Ten Towns were bury'd. Nay, all *Europe* was sensible of the Shock of the Earthquakes of these Years. In 1691, the Plague invaded *Puglia*, and swept off great Numbers of the Inhabitants : And some Places were pinch'd with Famine.

These, and such other Accidents, usher'd in the fatal Apoplexies that rage still to this *December*, 1695, in which I write. 'Tis needless to insist on the Cure of Apoplexies in general, in regard I have treated of that Subject above, in the First Book of my *Practice*, Chap. 9. §. *Of Apoplexies*. Besides, I design to speak more particularly to that Head, in a peculiar Treatise that must shortly see the Light.

F I N I S.















